

FireBallTM 
DIGITAL MUSIC PLAYER
MP-100

**Installation
and User's
Guide**

Escient
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Chapter 1 - Introduction

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About This Manual

This combination installation and user's manual serves as a step-by-step guide to setting up the FireBall-MP system developed and shipped by Escient. Chapter 2 shows you how to set up and connect FireBall-MP to your other equipment, while the rest of the Chapters show you how to use FireBall-MP for your music enjoyment.

Record Your Serial Number

The serial number for this unit is located at the rear of the device. Please record the serial number in the space provided below. Refer to it whenever you call upon your Escient dealer regarding this product.

FireBall-MP Serial No. _____

Copyright

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Warranty Information

Terms of Coverage - Each Escient branded music management system sold comes with a standard one (1) year warranty. This warranty provides no-charge coverage under normal product usage, for a period of one year from the date of registration and/or purchase (whichever is earlier). This warranty program provides the following key features and benefits:

- Twelve (12) months service, parts and labor.
- Five (5) day turn around time on all standard in-warranty repairs. No charges to the customer other than in-bound shipping charges which are determined by the shipping method. All return shipments will be via Standard Ground Transportation (approximately 5 business days).
- Twelve (12) months of regular hour telephone support (9AM to 7PM EST), Monday through Friday.
- 24-hour email response from the Escient Support Website.
- Free software upgrades for a period of twelve (12) months. 24-hour on-line software maintenance updates provided via a broadband or dial-up telephone connection.
- Access to 24-hour music database (CDDDB) and entertainment services providing access to over a million CD titles and associated information.

What is Covered - The goal of this warranty is to cover operational problems that might arise with your product during normal use. This includes failure to start, improper operation, or intermittent failures. As part of the warranty, Escient will pay for all labor and materials used in the repair of the system. Escient reserves the right to use new or factory refurbished parts in the repair of these in-warranty systems.

Escient will also pay for the return shipment of the repaired system via standard ground transportation.

At Escient's discretion, the Company will repair or replace any system sent in for repair. Upon repair, the product will be new or like-new in condition and will meet all necessary regulatory requirements.



What is Not Covered - Escient products are sold through Escient approved dealers. A number of items must remain intact in order for Escient to verify and validate this warranty. Additionally, there are several conditions which violate Escient's warranty program. These include:

- The product was not purchased through an approved Escient Dealer.
- Any product, on which the serial numbers has been defaced, modified or removed physically or electronically will not be covered by an Escient warranty.
- Escient will not cover under warranty damage to the product as a result of accident, misuse, abuse, neglect, fire, water, lightning, or other acts of God or nature, improper storage, unauthorized modification, or failure to follow instructions.
- Any type of unauthorized repair or modifications made to the system resulting in damage to the product will not be covered under this warranty.
- Damage caused to the product as a result of improper shipping or installation.
- Any problems related to the use of the product which is not a direct problem with the product.
- Damage caused to the product as a result of improper installation to third party peripherals or products, or incorrect connection to peripheral or products.

Additionally, Escient does not cover the following items under the terms of its warranty programs:

- Installation or removal charges.
- Cost of initial technical adjustments (setup costs).
- Battery replacement.

Escient's sole liability for any defective product is limited to the repair or replacement of the product at our discretion. Escient shall not be liable for damages to other property caused by defects in this product, damages based upon inconvenience, loss of use of the product, loss of time or data, commercial loss or any other damages, whether real, incidental or consequential.



How to Return a Product - Contact your dealer or Escent's Customer Support group at 800-372-4368. Please have the following information ready for your dealer or Escent's Customer Support technician.

- Product Serial Number
- Model Number
- Date of Registration or Purchase
- Place of Purchase

Upon reviewing the request for repair under warranty provisions, Escent's Technical Support group will issue a Return Material Authorization (RMA) number. This number is to be attached to the outside of the shipping carton. Additional instructions will be provided by technical support.

Please be sure to use original packing carton and internal packing materials to assure proper shipment of the system. Insurance costs are the responsibility of the customer. Most shippers only provide standard coverage for \$100 in cost so please protect yourself by providing additional insurance for the returned product.

Out of Warranty Repair - Escent provides out of warranty repair service on a cost plus labor basis. Minimum charges will apply. Technical support will provide information on this service at the time of the call.



Trademarks & Service Marks

Escient and the Escient logo are registered trademarks of Escient.

FireBall-MP and Physital are trademarks of Escient®.

Other product names mentioned herein are used for identification purposes only and may be trademarks of their respective companies.

CD-related data from Gracenote CDDB®, copyright ©1999 - 2003 Gracenote. CDDB is a registered trademark of Gracenote. The Gracenote logo and the Gracenote CDDB logo are trademarks of Gracenote. Music Recognition Service and MRS are service marks of Gracenote.



Enhanced entertainment services are provided under the OpenGlobe™ name, by Escient. These services provide the ability to explore new music, learn about artists and their influences, purchase new music, movies, and more.



Escient Privacy Policy

Escient is committed to providing you with a product that you enjoy and are confident in using, and are committed to providing services in a private and secure environment.

We recognize and respect each individual user's privacy and have created this Privacy Policy to demonstrate our commitment to your privacy.

We want you to be fully informed about the information that we collect, why we collect it, and with whom we share it.

It is our hope that, after reading this notice, you will understand our commitment to privacy and be confident that we will use your information responsibly. By using the Escient FireBall-MP, you are accepting the practices described in this Privacy Policy.



The option to read the Escient Privacy Policy appears on the zip code screen of the Quick Start automatic setup procedure.

In addition, you can access the statement at any time by pressing the SETUP key and choosing the option: **user information, privacy policy**.



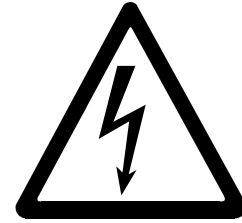
Cautions & Warnings

Caution: To reduce the risk of electric shock, do not remove the cover. No user serviceable parts are inside. Refer servicing to qualified service personnel.

Caution: To prevent electric shock, do not use a 3 wire to 2 wire adapter plug.
A 3 prong outlet is required.

Caution: You are cautioned that any change or modification not expressly approved in this manual or approved in writing by an authorized representative of Escient could void your warranty and/or your authority to operate this equipment.

Caution: Prolonged use of any video device which produces a static (non-moving, non-changing) or repetitive image on your projector, television or plasma display device can cause “screen burn-in”. You are encouraged to leave the FireBall-MP screen-saver turned on and set to the lowest possible “time-out” duration.



Important Safety Instructions

- Read these instructions.
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- Do not use this apparatus near water.
- Clean only with a dry cloth.
- Do not block any ventilation openings.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- Do not defeat the safety purpose of the grounding-type plug. A grounding type plug has two blades and a third grounding prong. The third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.



- Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- Only use the attachments/accessories specified by the manufacturer.
- Unplug this apparatus during lightning storms or when unused for long periods of time.
- Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
- The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.
- **WARNING** To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.



Manual Disclaimers

At the time of printing, the FireBall-MP screen shot images in this manual matched the FireBall-MP interface screens. However, since FireBall-MP has the capability of downloading software updates and enhancements on a regular basis, the resulting screen updates may no longer match the images in this manual. Check the Escient website for any updates.

Limits

The FireBall-MP system has the following maximum limits:

- Only MP3 tracks are available for streaming to FireBall-MP units.
- Up to 200 tracks can be added to a Playlist



Terms and Definitions

Following are terms used throughout this manual.

- **Button** - refers to a graphic item on the display screen.
- **Group** – a collection of similar music titles. Standard groups are provided (such as groups based on genre) and custom groups can be created. For example, within the Music Guide, groups contain a collection of CD's, recorded CD's, or custom Playlists organized automatically by genre or manually by the user.
- **Highlight** – highlighting is used to indicate the user's selection on screen. When the selection moves up, down, left, or right, the highlight moves to the next nearest item. No action is taken except that more information may be displayed on the screen, until the Select key is pressed.
- **Info text area** – the portion of the guide screen used to display information about the highlighted title.
- **Key** - refers to one of the buttons on your remote or keyboard.
- **MP3** - a compressed digital audio format. MP3 files are smaller than the original CD tracks and sound almost identical.



- **Playlist** – a custom Music title made up of tracks from one or more titles – in effect, a custom CD.
- **Selected** – the result of pressing the PLAY or SELECT key to activate the highlighted title, track, or program.
- **Source** – any one of the primary modes of operation –iRadio or Music.
- **Title** – a collection of music tracks.
- **Track** – single song from a CD, collection of MP3s, or a Playlist. Tracks are typically organized into Titles.
- **WAV**– an uncompressed audio file format. WAV files are temporarily created before they are compressed into MP3 files. If you choose the **uncompressed** bit rate for your music recording preferences, uncompressed tracks are stored in the WAV format.

NOTE: FireBall-MP can not stream WAV files from the FireBall-MP server.



Contact Information

Escient may be contacted by using the following information. Once you have worked with your local Escient dealer, we encourage you to contact us if you are in need of any further assistance.

Escient
6325 Digital Way
Indianapolis, Indiana 46278
Phone: 800-372-4368 Press “2” for Sales, or “3” for Support
Hours: Monday - Friday 9:00am - 7pm EST
Fax: 317-616-6790
www.escient.com
E-mail: support@escient.com



Please visit the Escient website at www.escient.com for the current product updates, technical information, and document updates.

The website is also the most convenient method for accessing information, 7 days a week, 24 hours a day.



Chapter 2-Setting Up FireBall-MP

Unpack The Equipment

What Else Is Needed

Back Panel Reviewed

Connecting FireBall-MP to a TV or Monitor

Connecting Devices Using the IR Input

Connecting to Ethernet Networks

Connecting to Third Party Control Systems

Connecting to a Multi-Room Controller or Touch Screen

Connecting the Power Cord

FireBall-MP Power States: On, Standby, Off



Unpack The Equipment

- ① Carefully unpack all of the FireBall-MP equipment from the shipping container.
- ② Next, compare it to the following list and make sure you have everything available before you get started.
 - FireBall-MP unit packed in plastic bag
 - Escient 48 button remote control with 2 AA batteries
 - Detachable A/C Power Cord - 6'
 - S-Video cable (Y-C) - 5'
 - Composite Video cable - 5'
 - Dual RCA cable - 5'
 - User/Installation Manual
 - Open Me First Guide
 - Thank You Card
 - Ethernet cable - 10'



Since no two people are likely to have the same exact audio or video configuration, the steps involved in putting the FireBall-MP system together are not specific to any one piece of audio or video equipment. Therefore, it may be necessary for you to customize one or more of the cables that are included with this equipment. Please see Appendix A for a cable pin-out configuration guide.

Depending upon the intricacy of the audio and video equipment and the access to each component, installation should take approximately 2-4 hours.

Unpack The Equipment (continued)

③ You must have a FireBall or FireBall E server (available separately) as FireBall MP contains no music and streams everything from the FireBall server.

Optional items:

- Escient Touch Screen: Model ETP-1000
- RS-232 Communication Cables (control systems)
- FireBall-MP Rack Mount Kit (available from Middle Atlantic at <http://www.middleatlantic.com> or 973-839-1011)
- Optical or Coaxial Digital Audio Cable
- FireBall Wireless Keyboard

What Else Is Needed

In order for FireBall-MP to function properly, you will need to provide the following items:

- ❶ A video source such as a television, monitor, VGA projector or touch screen.
- ❷ An A/V receiver or preamp, speakers, and other associated audio equipment.
- ❸ A FireBall or FireBall E Digital Music Manager.

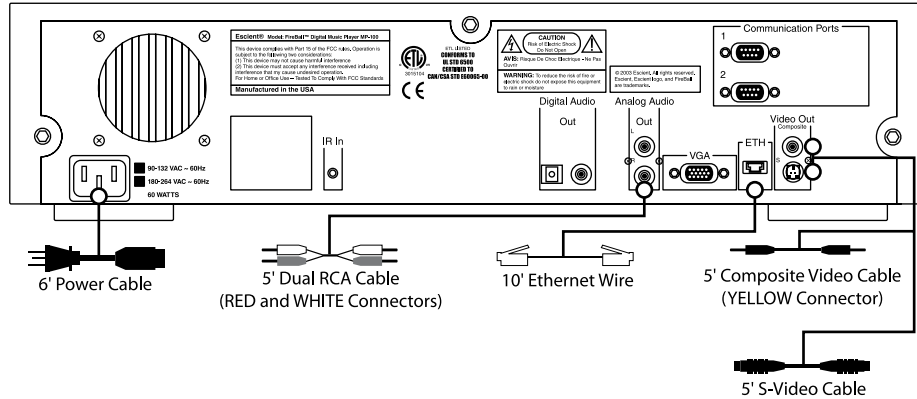
NOTE: FireBall-MP does not store it's own digital music. FireBall-MP streams music from other remote FireBall Digital Music Managers over an Ethernet network.

FireBall-MP Back Panel Reviewed

Review the back panel of the FireBall-MP unit and the associated cabling.



Please note that audio and video ports on the back panel of the actual FireBall-MP unit are labeled and color-coded.

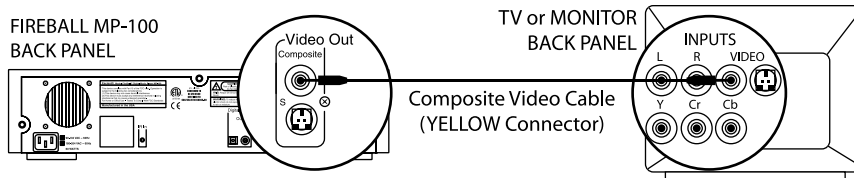


Connecting FireBall-MP to a Composite TV or Monitor

- 1 Use the **Composite Video Cable**, which can be identified through its yellow colored connectors.



- 2 Connect one end of the cable to the **FireBall-MP Video Out (Composite) port**.



- 3 Connect the other end of the cable to the **Video In (Composite) port on your TV or AV Receiver**.



The cables you receive are black. The connectors on the cables are the only portions that are “colored.”



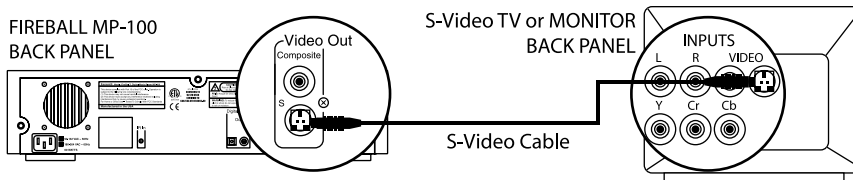
If connecting FireBall-MP to a TV or AV Receiver, there may be several VIDEO IN ports. Use a VIDEO IN port that is not currently being utilized.

Connecting FireBall-MP to an S-Video TV or Monitor

- 1 Use the **S-Video Cable**, which can be identified as a gold cup connector with tiny pins inside.



- 2 Connect one end of the cable to the **FireBall-MP Video Out (S-Video) port**.



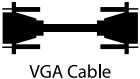
- 3 Connect the other end of the cable to the **S-Video In port on your TV or AV Receiver**.



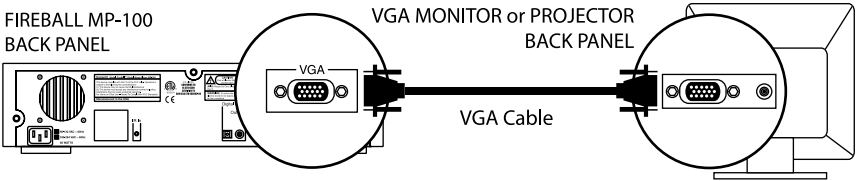
Whenever possible, use the S-Video cable to connect FireBall-MP to a TV or AV Receiver. S-Video will provide better image quality than Composite video.

Connecting FireBall-MP to a VGA Projector, Monitor or Touch Screen.

- 1 Use a VGA cable.
(Not supplied with FireBall-MP.)



- 2 Connect one end of the cable to the **FireBall-MP VGA port.**



- 3 Connect the other end of the cable to the **VGA port on your VGA device.**



If you are connecting to a VGA Projector or Monitor, you will need to supply your own VGA cable (must be less than 25 feet).

The Escent ETP-1000 includes the proper VGA cable.

About Connecting Audio

FireBall-MP does not contain an amplifier nor does it contain speakers, so it will be necessary for you to have your FireBall-MP attached to an A/V receiver, TV, or amplified speakers. Follow your particular manufacturer's instructions for this hookup procedure.

FireBall-MP is equipped with output ports:

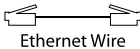
- 1 set of stereo analog audio outputs
- 1 coax digital output
- 1 optical digital output

Connect one of these outputs to your TV, receiver, or powered speakers.

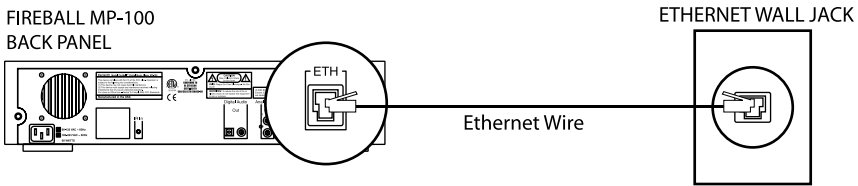
Connecting to Ethernet Networks

FireBall-MP has an Ethernet jack which is used to connect to the FireBall server and to allow internet access through your Ethernet LAN.

- 1 Use the **Ethernet Cable**.
(Can be identified by see-through connectors. This is the larger of the two cables with see-through connectors, also known as an RJ-45 cable)



- 2 Connect one end of the ethernet cable to the **FireBall-MP Ethernet jack**.



- 3 Connect the other end of the ethernet cable to an **Ethernet network**.

Connecting to Third Party Control Systems

Two RS-232 serial ports are available on FireBall-MP. You must use COM 2 to control FireBall-MP from an external home theater or whole house control system.

FireBall-MP is compatible with AMX and Crestron RS-232 control systems. Additional equipment may be supported. Please check the Escient website for an updated list of compatible control systems.*

The RS-232 cable needed to connect FireBall-MP to any of these models is dependent upon the model's RS-232 pin configuration, and therefore the cable may have to be custom-made. In most cases this will be a DB-9 Null Modem Cable (refer to Appendix A).

- ❶ Find the RS-232 pin configuration for your Control System model in Appendix A of this manual.
- ❷ Contact a Custom Cable Supplier to make a cable for your particular configuration.
- ❸ Connect one end of this cable to the COM 2 port.
- ❹ Connect the other end of this cable to the RS-232 communication port on your Control System.



* Control and Audio Distribution system models that can integrate with FireBall-MP are updated periodically and may not be reflected in this particular manual.

Please consult your Dealer or the Escient website if you wish to use a control system not specified in this manual.

Connecting an Escient Touch Screen

Two RS-232 serial ports are available on FireBall-MP. You must use COM 1 to control FireBall-MP from the optional Escient ETP-1000 Touch Screen.

Other touch screen systems may be compatible. Please contact your dealer for more information.

The RS-232 cable needed to connect FireBall-MP to the Escient ETP-1000 touch screen is included with the touch screen.

- ❶ Connect one end of this cable to COM 1.
- ❷ Connect the other end of this cable to the RS-232 communication port on the ETP-1000 touch panel.

See section “To Change Com Port Settings” in Chapter 7 to enable and configure the touch screen for use.



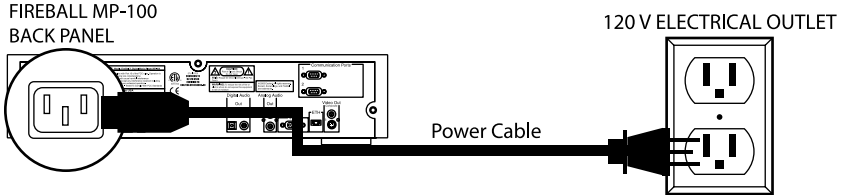
Please consult your Dealer or the Escient website if you wish to use a touch screen not specified in this manual.

Connecting the Power Cord

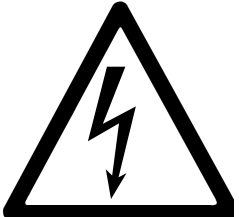
1 Use the **Power Cord**.



2 Connect one end of power cord to the **FireBall-MP AC Port (plug)**.



3 Connect the other end of the power cord to a 120V electrical outlet.



Caution: To prevent electric shock, do not use a 3 wire to 2 wire adapter plug. A 3 prong outlet is required.



It is recommended to connect the power cord to a UPS, surge suppressor, or directly to a wall outlet. NEVER CONNECT THE POWER CORD TO A SWITCHED OUTLET.

FireBall-MP Power States: On, Standby, Off

After the FireBall-MP unit is plugged in, the Standby LED located next to the power button will flash until the startup process is complete. **Please wait. This may take several minutes.**

When the Standby LED is OFF, the FireBall-MP is now in a standby or “sleep” mode. There is no video output when FireBall-MP is in standby mode. Press the Power button (on the front panel or on the remote) once and the video output is displayed on your TV. The unit is now ON.

To change from the ON mode back to the standby or “sleep” mode, press the Power button on the front panel or on the remote once.

If power is removed from FireBall-MP for any reason, including a power outage or if the unit is unplugged, FireBall-MP will automatically return to the Standby state as soon as power is restored. When FireBall-MP is turned on again, FireBall-MP will return to the same source mode that it was in when power was lost.

To force the FireBall-MP to restart, PRESS and HOLD the Power button for 4 seconds, and release it when the standby LED starts blinking. When the Standby LED is off and FireBall-MP has completed its startup process, press the Power button once to turn on the FireBall-MP.



Please follow the guidelines regarding Power ON and Power Standby procedures.

FireBall-MP has four power states:

1. **ON - you will see video output on your display.**
2. **STARTING (flashing LED)**
3. **STANDBY or SLEEP - no video output, the Power LED is lit constant, powered but not running.**
4. **OFF - unplugged from the wall.**

Chapter 3 - Getting Started

Front Panel Basics

Using the Remote Control

Text Entry Via the FireBall-MP Remote Control

What Is The Setup Process?

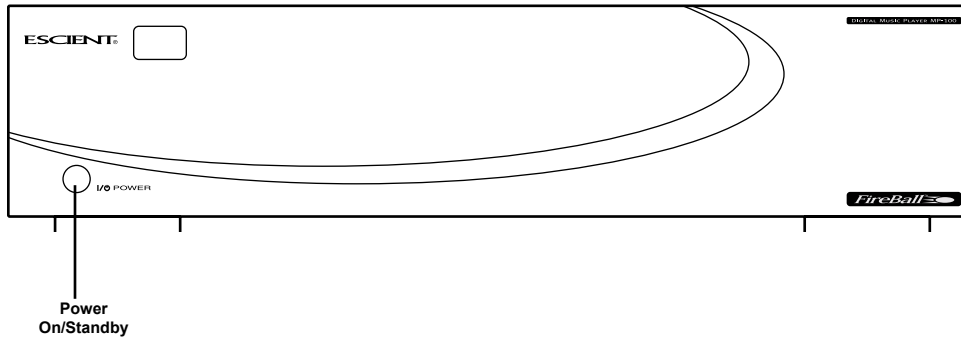
Using the Remote, Keyboard or Touch Screen

Overview of User Interface



Front Panel Basics

The FireBall-MP front panel contains only the power button and IR receiver. You should use the included wireless IR remote to control your FireBall-MP.



Using the Remote Control

The FireBall-MP IR remote is a Universal remote control with capabilities to control other Escient products, as well as 5 other common home theater sources.

SOURCE KEYS - puts the remote into each of the following modes:

AUX - all others

CBL - cable convertors

DVD - DVD player

TV - Television

FB - FireBall

TB - TuneBase 200

PP - not used

RCV - receivers or stereo tuners (TNR=RCV on remote)

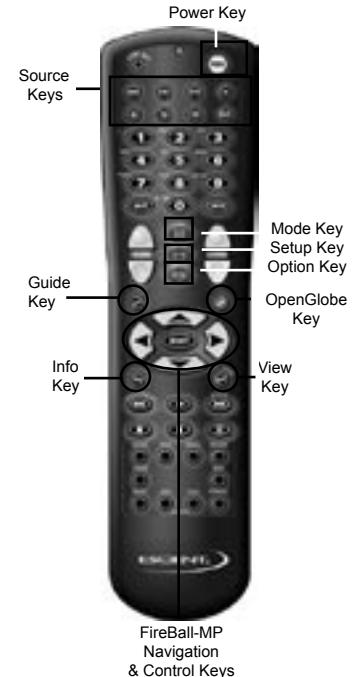
GUIDE - toggles between the Guide and Player screen.

INFO - used to toggle the type of details you see on your screen. For instance, if you're in player mode the cover art would be replaced with track times. This is also used to toggle "select all tracks/select no tracks" under the current title when you are in Delete Music mode, Transfer to Portable mode, Create/Edit Playlist mode, Create/Edit Group mode, and in the Record screens.

POWER - operates on the currently selected source and turns the unit to standby.

MODE - toggles through the different play modes.

SETUP - shows FireBall-MP's setup menu for making system-wide changes.

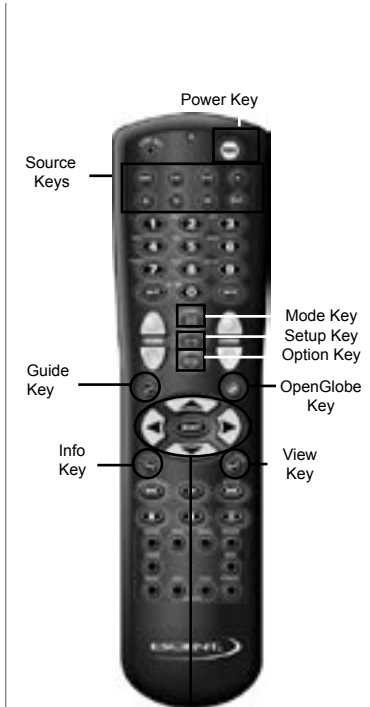


OPTION - brings up the OPTIONS screen for the current Guide or Player.

OPENGLOBE - takes you to the CE-Commerce screens to allow you to browse and purchase music and movies using your FireBall-MP.

VIEW - toggles the Guide screen Views through Artist, Music, Song, and Cover views.

Navigation Keys - the **UP, DOWN, LEFT, and RIGHT ARROW** keys are used to navigate and highlight items, while the **SELECT** key is used to accept the currently highlighted item.



FireBall-MP
Navigation
& Control Keys

NUMERIC/TEXT keypad - allows you to enter text and numbers. Both text and numbers are active at all times unless only numeric data can be accepted at that time. An on-screen indicator will show you when only numeric data will be accepted. Text entry is described later in this section.

VOLUME - turns the volume up or down for the current source (See Appendix H.).

CH/PAGE up and **down** keys are used to page full screens in the Guide or Player.

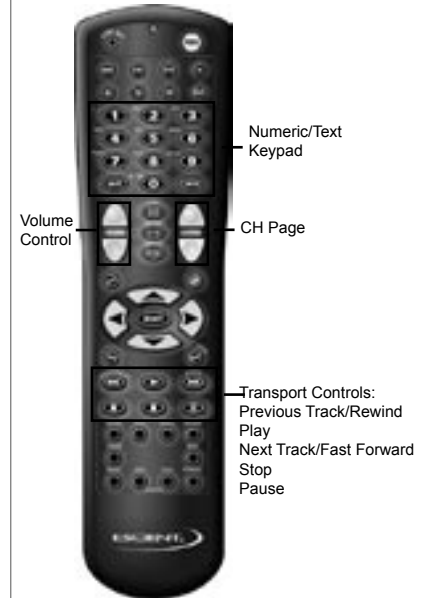
TRANSPORT Controls:



The **BACKSPACE** key operates as a standard Previous Track key when it is pressed once by starting the current track over. Pressing the key again within two seconds will skip back to the previous track. Pressing and holding this key will perform a scan backwards and you will hear the music as it scans back at high speed. This key is also used as the Backspace key when entering text in a text box such as on the registration screen. Finally this key can also be used as the back button when browsing the OpenGlobe CE-Commerce opportunities.



The **PLAY** key causes the currently highlighted item in the Guide or the Player to be played. This key is also used to clear all of the text in a text box.





The **SPACE** key operates as a standard Next Track key when it is pressed by advancing to the start of the next track. Pressing and holding this key will perform a scan forward and you will hear the music as it scans forward at high speed. This key is also used as the Space key when entering text in a text box such as on the registration screen. Finally this key can also be used as the Forward key when browsing the OpenGlobe CE-Commerce opportunities.



The **RECORD** key is used as a Save button to commit changes made on many screens throughout FireBall-MP.



The **STOP** key is used to stop music that is currently playing. This key is also used as a Cancel button or to exit certain screens in FireBall-MP. This key also acts as the STOP loading pages button when browsing the OpenGlobe CE-Commerce opportunities.



The **PAUSE** key is used to pause music that is currently playing.



Transport Controls:
 Previous Track/Rewind
 Play
 Next Track/Fast Forward
 Stop
 Pause

iRADIO - selects Internet Radio as the current mode. The currently available Internet Radio stations will be displayed.

MUSIC - selects Music as the current mode. The contents of your music collection will be displayed.

NEXT - skips forward to the next song based on the current play mode.

RANDOM - allows one key access to start playing your music randomly.

ADD TO FAVORITES - adds the currently highlighted song to the special Playlist called “favorites”.

PLAY FAVORITES - allows one key access to play your favorite music. Plays the “Favorites” Playlist.



Text Entry Via the FireBall-MP Remote Control

The remote control can be used to enter text in all text fields. This text entry capability is provided to allow you to fill out short text fields – such as those that occur in the setup and edit screens. FireBall-MP's IR keyboard should be used when extended typing is required.

Entering Numeric Entry Mode

In fields where FireBall-MP expects only numeric characters to be entered (such as phone number fields), an indicator will appear on the screen that displays the letters “123” indicating that only numbers can be entered.

Typing Characters with the Remote

The remote control based text entry capability is similar to that provided on standard telephones and cell phones. Each numeric key has characters associated with it that can be accessed by pressing the key one or more times. You have .5 seconds after a key is pressed to enter a second character from the same key. If you press the same key within .5 seconds, the second character associated with that key replaces the initial character. If you do not press the same key within .5 seconds, the text cursor moves to the next location so that the same key can be pressed again to enter a second character.



Text entry is always in the Insert Mode rather than in Overtyping mode.

The “2”, “3”, “4”, “5”, “6”, and “8” keys each support three letters and one number and can be pressed from one to seven times to display upper case, lower case, and numeric characters. The “7” and “9” keys both support four letters and one number and can be pressed from one to nine times. The “1” and “0” keys support all of the special characters and will cycle through each character for every key press.

The text characters follow the same convention used by a standard telephone – except in the case of the “1” and “0” keys which contain additional characters that are useful for editing music information.

When entering characters at the beginning of a field or characters that follow a space, FireBall-MP assumes that upper case characters are preferred. Therefore, characters are entered in the following cycle – uppercase, lowercase, and numeric. For example, the first key press enters an uppercase letter corresponding to the first letter associated with the key. Pressing the “2” key once displays an “A” in the text field, pressing the “2” key twice displays a “B”, pressing it again will display a “C”. The fourth key press displays a lower case “a”, the fifth key press displays a lower case “b”, and the sixth key press displays a lower case “c”. Lastly, pressing the “2” key a seventh time displays the number “2”.

When entering the second character in a text field or the second character following a space, FireBall-MP assumes that lower case is preferred and the character entry cycles in the following pattern – lowercase, uppercase, and numeric.



The following text entry table describes the sequence of characters that appear when specific keys are pressed on the remote:

Numeric Key	Alpha-numeric Mode 1 st character or 1 st character after a space	Alpha-numeric Mode 2 nd character or 2 nd character after a space
1	1. / , ? ' ; ; & ~ !	1. / , ? ' ; ; & ~ !
2	ABCabc2	abcABC2
3	DEFdef3	defDEF3
4	GHIghi4	ghiGHI4
5	JKLjkl5	kljJKL5
6	MNOmno6	mnoMNO6
7	PQRSpqrs7	pqrsPQRS7
8	TUVtuv8	tuvTUV8
9	WXYZwxyz9	wxyzWXYZ9
0	0@ _ - * # [] () +=	0@ _ - * # [] () +=

Navigating within a text entry box using the remote:

- Backspace over text – Backspace key
- Delete text – Play key (clears all text input in the current Edit Field)
- Insert a space in text – Space key
- Cursor left within a text field – Left arrow key
- Cursor right within a text field – Right arrow key

To exit a text entry box:

- Press the Enter or Select key to accept the text and move the text cursor to the to the next available text field or to highlight the next available non-text field.
- Press the up or down cursor key to move the highlight to the next available field.
- Press the Record key (if in an Option screen) to save the text and exit the screen.

What Is The Setup Process?

Setting up a FireBall-MP is very easy once the FireBall Server is connected to an ethernet network and properly configured.

Upon power on, FireBall-MP will try to automatically locate and connect to a FireBall server. Please refer to your FireBall's User's Guide for instructions on properly connecting the FireBall Server to an Ethernet network.

If a FireBall server is not located, the FireBall-MP will continue to scan the network until a server is found. You should check your FireBall server's power status and Ethernet connection. The FireBall-MP and FireBall Server must be on the same Ethernet network.

Note: FireBall-MP can only connect to one FireBall Server at a time.

Using the Remote, Keyboard, or Touch Screen

You can navigate through the FireBall-MP menus and screens using the IR remote, optional wireless keyboard, or optional Escient touch screen.

Each device has its pros and cons and each individual user will undoubtedly have their favorite access method. It is possible that you may end up using different devices depending upon what you want to do.

The basics of navigation are:

- Use the UP, DOWN, LEFT, and RIGHT ARROW keys to maneuver around the screen to highlight items of interest.
- Use the SELECT key to accept the highlighted item.



In order to use your ETP-1000 Touch Panel, it must be calibrated with the calibration utility assisible from SETUP->AUDIO, VIDEO, and COM PORTS->CALIBRATE TOUCH PANEL.



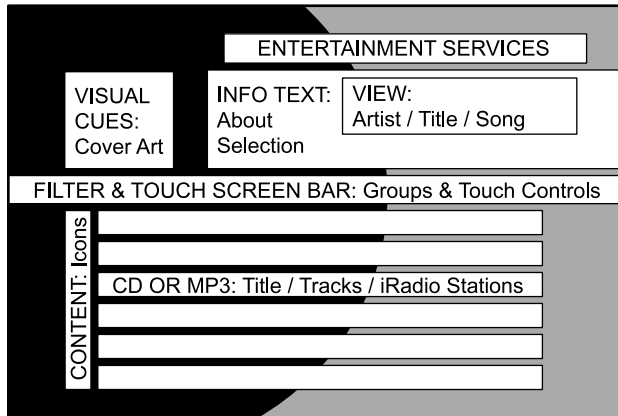
For a complete overview of each access device, please refer to the Appendices.

Overview Of User Interface

The FireBall-MP user interface is very simple and uses three common screens throughout. The screens operate consistently, regardless of the source. The screens you will see are Guide Screen, Player screen, and Options Screen.

Guide Screen Overview

Guides contain listings of content that can be selected for listening and assist you in finding and organizing your library.



Sample Guide Screen

Content Icons

In front of each title in the Guide Screen is a content icon that describes the format and the type of media in the music library. Following are descriptions of all the icons.



A collection of MP3 tracks



A collection of MP3 tracks on a disconnected remote FireBall-MP



An Internet Radio station.



A collection of songs known as a "playlist"



Sample Guide Screen

Player Screen

The Player screen is used to listen to audio content and display information about the currently playing content.

- The Music Player allows you to listen to a music selection and view the tracks that are being played, the name of the artist, the title, track times, and a large image of the album's cover art.
- The Radio Player allows you to listen to a selected iRadio station and view the station information and song information (if available).

Options Screen

The OPTIONS menu for Music and iRadio are similarly configured but the wording is different. Both of the menus allow you to organize and edit your music content.



Title/Track Area Details

- Each item in the list represents a collection of music known as a "Title" in the Music Guide or a "Station" in the Internet Radio Guide. Icons are displayed on the left side of each row to indicate the type of Title or Station.
- Each Guide always has one highlighted Title or Station.
- The currently highlighted title's information is displayed in the Info Text Area.
- Pressing the SELECT key when a Title is highlighted will expand the Title and reveal the tracks contained in that Title. Pressing the SELECT key again will collapse the Title and hide the track names.
- Titles are sorted alphabetically according to the current guide view: Cover, Songs, Titles, and Artists. The guide view can be changed by toggling the MENU/VIEW button on the remote or keyboard.
- Tracks are sorted by the track location on the original CD. On Playlists, tracks are sorted in the order they were originally selected when creating the Playlist.
- Pressing the PLAY key when a Title is highlighted will play the Title. Pressing the PLAY key when a Track is highlighted will play the track.

Screen Saver

All screens will display a screen saver after 10 minutes of inactivity (no user inputs received from the remote, keyboard, or front panel). You can change the timing of this option through the SETUP menu, PREFERENCES option. (10 minutes is the default)



Filter Bar Details

If more than 5 groups exist, the Filter Bar displays an arrow pointing right next to the right most group. This indicates that additional groups are available. When you cursor past the right most group to access a new group, all of the displayed groups will slide to the left. An arrow pointing left will be displayed in the left most group.

There are two System groups created automatically: ALL which always exists and includes all titles and PLAYLISTS which contains custom playlists created by you.

There are 15 groups generated automatically based on genre. These groups are Blues, Classical, Country, Dance, Easy, Family, Jazz, Latin, New Age, Other, Pop, R&B, Rock, and Sound Tracks. Each group will only appear if there is at least 1 Title of that genre in the database.



Chapter 4 - Playing Music

- Accessing Music Mode**
- Music Player Screen Overview**
- Navigating the Music Player Screen**
- Selecting and Listening to a Music Title**
- Viewing Music by Artist, Title, or Song**
- One Key Access to Favorite Music**
- One Key Access to Random Music**



Accessing Music Mode

To access Music mode:

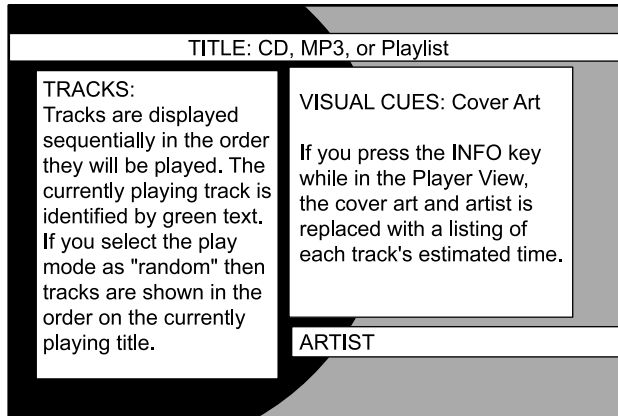
1. Select the MUSIC key. FireBall-MP displays the Music Guide view so that you can navigate and select an item of choice.
2. Select the RANDOM key on the remote. FireBall-MP displays the Player Screen and starts playing the currently selected group in Random Play Mode.
3. Once you have created a "Favorites" playlist, you can select the PLAY FAVORITES key to automatically start playing the music on this list.



While in Music mode, you can listen to MP3 tracks which are stored on the FireBall Server's internal hard drive.

Music Player Screen Overview

When you select a music title for listening, the screen displayed is the Music Player screen.



When a Playlist is playing, the cover and artist name from the currently playing track will be displayed and the Playlist name will appear in place of the usual title.

Navigating the Music Player Screen

- **ARROW** - Use the UP and DOWN keys to move the highlight from one track to another. The RIGHT and LEFT keys are not used on the Music Player Screen.
- **SELECT** - Pressing this key when a track is highlighted stops playing the selected track and starts playing the highlighted track. You can also play the track by pressing the PLAY key.
- **PAGE UP, PAGE DOWN** - These keys are used to scroll the music player track list one page at a time. Each page can display up to 12 tracks at a time. An arrow will appear at the bottom of the track list when there are more than 12 tracks in the current Title.
- **NUMERIC KEYPAD** - You can enter a track number using the keypad and then pressing the ENTER key.
- **INFO** - When you press this key, detailed track information is displayed including track times, current play mode, and the running time for the currently playing track.
- **RECORD** - Not Available.
- **PLAY, PAUSE, & STOP** - These keys are used to play, pause, or stop music. An onscreen status is provided each time the key is pressed.
- **TRACK NEXT & BACK** - These keys are used to skip forward and backward to the next/previous track. An onscreen status is provided each time the key is pressed.



Selecting and Listening to a Music Title

- ❶ Press the MUSIC key and the MUSIC GUIDE screen appears.
- ❷ Use the LEFT and RIGHT ARROW keys to highlight the GROUP of your choice.
- ❸ Use the UP and DOWN ARROW keys to highlight the music title of your choice.
- ❹ Press the PLAY key to play the highlighted title. The title, tracks, and cover art are displayed in the Player screen and the music plays.

Viewing Music by Artist, Title, Cover or Song

- ❶ Press the MUSIC key if you are not in Music Mode.
- ❷ Press the GUIDE key, if you do not see the Music Guide. The MUSIC GUIDE screen appears.
- ❸ Press the MENU/VIEW key. The screen will toggle through each of the different Music Guide Views. You'll see your music collection sorted alphabetically and displayed by Artist Name, Title, Songs or by Cover Art.



One Key Access to Favorite Music

The PLAY FAVORITES key on the remote or keyboard allows you to immediately start playing the music in your “Favorites” playlist. No other key presses are required once you have added music to the list.

To add music to your “Favorites” playlist from the Music Player screen, simply press the ADD FAVORITES key on the keyboard or remote to quickly add the CURRENT highlighted track to the playlist. "Song will be added to Favorites" will appear across the bottom of the Player screen for 3 seconds.

To add music to your “Favorites” playlist from the Music Guide, simply highlight any Track name and press the ADD FAVORITES key on the keyboard or remote. “Song will be added to Favorites” will appear in the Information area of the Guide screen.

One Key Access to Random Music

When you press the RANDOM key on the remote or keyboard, FireBall-MP automatically starts playing the current group in Random Group mode.



Chapter 5 - Managing Music

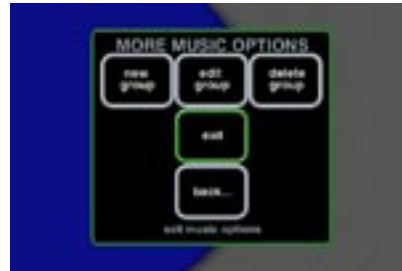
- To Further Organize Your Music
- To Create a New Music Playlist
- To Edit a Music Playlist
- To Delete a Music Playlist
- To Change How Music is Played
- To Delete Digital Music on FireBall-MP
- To Edit Tracks
- To Edit Disc Information
- To Access “More...” Music Options
- To Create a New Music Group
- To Edit a Music Group
- To Delete a Music Group



To Further Organize Your Music

You can easily manage your music through FireBall-MP's MUSIC OPTIONS feature. This set of screens allows you to create and manage Playlists (lists of songs) and Groups, look up and edit music information, and transfer music to portable players. In addition, MUSIC OPTIONS also allows you to adjust play modes.

There are two screens of MUSIC OPTIONS. The first screen appears when you press the OPTION key while in MUSIC mode. The second screen becomes available after selecting the “more...” button in the MUSIC OPTIONS panel.



“**Button**” refers to a graphic item on the display screen.

“**Key**” refers to the pushdown mechanisms on your remote or keyboard.



Use the ARROW keys to highlight the desired option and use the SELECT key to activate the desired option.

To Create a New Music Playlist

A Playlist is a collection of specific songs from your music collection.

- ① Press the MUSIC key.
- ② Press the OPTION key. The OPTION panel appears.
- ③ SELECT the **new playlist** button. A screen displays so that you can enter the name for the new playlist.
- ④ After you have entered the new name, press SELECT to continue.
- ⑤ When the playlist name is saved, the screen transitions to the EDIT PLAYLIST screen where you will select the tracks you want to add to the Playlist from all the music FireBall-MP knows. Use the ARROW keys to navigate through the music and highlight your choice. Use the SELECT key to toggle between including (shows check mark) or not including a track in the current Playlist.
- ⑥ Press the RECORD key to save the new playlist and exit the OPTION mode.



If no songs are added to a new Playlist, it is not saved. Likewise, if all songs are removed from a playlist, it is deleted.

Up to 200 songs may be added to a playlist.

There is no limitation on the number of playlists you can create.

To Edit a Music Playlist

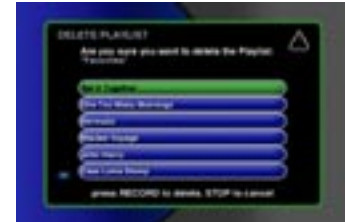
- ❶ Press the MUSIC key to show the Music Guide.
- ❷ Use the ARROW keys to highlight the music playlist you want to edit.
- ❸ Press the OPTION key.
- ❹ SELECT the **edit playlist** button. The EDIT PLAYLIST screen is displayed and allows you to edit the name of the playlist. You do not have to edit the name of the playlist in order to modify its members.
- ❺ Press the SELECT key to continue so that you can modify the tracks in the playlist.
- ❻ Cursor UP and DOWN to highlight the titles. A check mark indicates when a track is to be included in the playlist. Use the SELECT key to toggle between including or not including a track.
- ❼ Press the RECORD key to save this playlist and exit the OPTION mode.



Use the INFO key when a Title is highlighted in the Edit Playlist screen to add/remove all tracks to/from the playlist.

To Delete a Music Playlist

- 1 Press the MUSIC key to show the Music Guide.
- 2 Use the ARROW keys to highlight the music playlist you want to delete.
- 3 Press the OPTION key.
- 4 At the OPTION panel, SELECT the **delete playlist** button to remove the currently active playlist. The DELETE PLAYLIST screen displays and shows the contents of the playlist.
- 5 Press the RECORD key to delete the playlist and return to the previous Guide or Player view. A dialog message displays asking for confirmation before the playlist is deleted.



To Change How Music is Played

- ❶ Press the MUSIC key and then press the OPTION key.
- ❷ At the OPTION panel, SELECT the **play mode** option button.
- ❸ Select the option of your choice from the available settings:
 - **normal** - Start with a selected track and play the entire Title or Playlist to the end.
 - **repeat track** - Keep playing the current track over and over again.
 - **repeat title** - Keep playing the current music Title (MP3, or Playlist) from start to finish and then start over.
 - **repeat group** - Keep playing all the music Titles in the current group of music from start to finish and then start over.
 - **random title** - Randomly select and play songs from the current Title (MP3, or Playlist)
 - **random group** - Randomly select and play songs from the current group of music.
- ❹ Press the SELECT key to set the selected play mode and return to the previous screen.

Note: The MODE key on the remote will cycle through each of these modes.



To Delete Digital Music on FireBall-MP

FireBall-MP uses an internal hard drive to store your digitally recorded music. If you want to delete music from your FireBall-MP, follow these instructions.

- ➊ Press the MUSIC key to show the Music Guide.
- ➋ Press the OPTION key.
- ➌ At the OPTIONS panel, SELECT the **delete music** option. The DELETE MUSIC screen displays an information panel that shows a storage meter indicating how much storage space has been used, the number of tracks that have been recorded, as well as how many more tracks and hours of music can still be recorded to FireBall-MP.
- ➍ Press the SELECT key to advance to the Delete Music Select Guide.
- ➎ Cursor UP and DOWN to highlight the titles and SELECT to expand and collapse titles. Use the SELECT key on a highlighted track to toggle a check mark on and off. A check mark indicates when a track is to be deleted.
- ➏ Press the INFO key to select or deselect all tracks on a highlighted title.
- ➐ Press the RECORD key to delete the selected music tracks and exit the DELETE MUSIC screen.



The hours left and tracks left calculations are based on the current bit rate setting which is also shown on the information screen.



Use the INFO key when a Title is highlighted in the Delete Music Select Guide to select/deselect all tracks.

To Edit Tracks

This option allows you to modify the track name for the currently highlighted title.

- ❶ Press the MUSIC key to show the Music Guide.
- ❷ Use the ARROW keys to highlight the title which contains the tracks you want to edit.
- ❸ Press the OPTION key.
- ❹ At the OPTION panel, SELECT the **edit tracks** button. The EDIT TRACKS screen displays.
- ❺ Use the UP and DOWN ARROW keys to highlight the desired track.
- ❻ Enter a new track title/name and press the ENTER key to save the current track name and advance to the next track. You can press the PLAY key to clear the current track name.
- ❼ Press the RECORD key to accept the changes.



To Edit Disc Information

This option allows you to edit the music collection's information such as artist name, title, label name, and year of release. Or, you can have FireBall-MP look up the latest information from Escient's OpenGlobe service.

Edit Disc is also the method to identify the current disc and download it's cover art.

- ❶ Press the MUSIC key on your remote or keyboard.
- ❷ Press the GUIDE key. The MUSIC GUIDE screen appears.
- ❸ Use the ARROW keys to highlight the disc you want to edit.
- ❹ Press the OPTION key.
- ❺ At the OPTION panel, SELECT the **edit disc** button. The EDIT DISC INFO screen displays.
- ❻ Use the ARROW keys to move to the text field of your choice and edit the field.

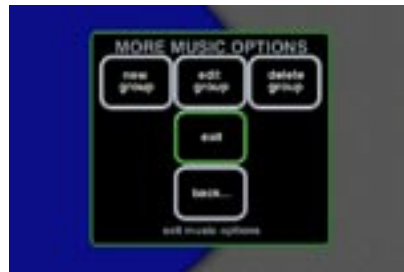


To Access “More...” Music Options

There are two screens of MUSIC OPTIONS. The first screen appears when you press the MUSIC key followed by the OPTION key.



The second screen becomes available after SELECTING the “more...” button in the original MUSIC OPTIONS screen.



“**Button**” refers to a graphic item on the display screen.

“**Key**” refers to the pushdown mechanisms on your remote or keyboard.



Use the ARROW keys to highlight the desired option and use the SELECT key to activate the desired option.

To Create a New Music Group

A group is a collection of content that classifies your music titles to make them easier to find. Genre groups such as Jazz, and Country are automatically generated depending upon the current music in your collection. The groups you create can be named whatever you want (i.e., My Favorites, Party Mix, Classics, etc...).

- ❶ Press the MUSIC key, and then press the OPTION key. Use the ARROW keys to highlight the **more...** button and press the SELECT key.
- ❷ At the MORE MUSIC OPTIONS panel, SELECT the **new group** button. A screen displays so that you can enter the name for the new group.
- ❸ After you have entered the new name, press SELECT to continue.
- ❹ When the group name is saved, the screen transitions to the EDIT MUSIC GROUP screen where you will select titles to be included in the new group. Cursor UP and DOWN to highlight the titles. A check mark indicates when a title is to be included in the group. Use the SELECT key to toggle between including or not including a title.
- ❺ Press the RECORD key to save the new group and exit the OPTION mode.



Music can reside in more than one group. For example, the same music could exist in the groups: All, Rock, Favorites, and Mine.



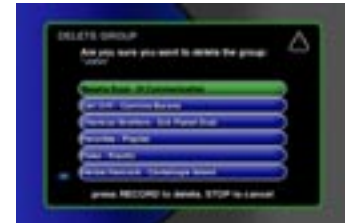
To Edit a Music Group

- ① Press the MUSIC key to show the Music Guide.
- ② Use the RIGHT and LEFT ARROW keys to highlight the group you want to edit.
- ③ Press the OPTION key. Use the ARROW keys to highlight the **more...** button and press the SELECT key.
- ④ At the MORE MUSIC OPTIONS panel, SELECT the **edit group** button. The EDIT GROUP screen displays which allows you to edit the name of the group. You do not have to edit the name of the group in order to modify the members of the group.
- ⑤ Press the SELECT key to continue so that you can modify the titles in the group when the EDIT MUSIC GROUP screen displays.
- ⑥ Cursor UP and DOWN to highlight the titles. A check mark indicates when a title is to be included in the group. Use the SELECT key to toggle between including or not including a title.
- ⑦ Press the RECORD key to save this group and return to the Guide.



To Delete a Music Group

- 1 Press the MUSIC key to show the Music Guide.
- 2 Use the RIGHT and LEFT ARROW keys to highlight the group you want to delete.
- 3 Press the OPTION key. Use the ARROW keys to highlight the **more...** button and press the SELECT key.
- 4 At the MORE MUSIC OPTIONS panel, SELECT the **delete group** button to remove the currently active group. The DELETE GROUP screen displays and shows the contents of the group.
- 5 Press the RECORD key to delete the group. A dialog message displays asking for confirmation before the group is deleted.



Chapter 6 - Using iRadio

Important Note for Playing iRadio Stations

Entering iRadio Mode

Reviewing the iRadio Guide

Navigating Among iRadio Stations

Playing an iRadio Station

Changing iRadio Options

To Create a New iRadio Group

To Edit an iRadio Group

To Delete an iRadio Group

To Tune Stations

To Create a New iRadio Station

To Edit an iRadio Station

To Delete an iRadio Station

Supported iRadio Bitrates



Important Note for Playing iRadio Stations

In order for your FireBall-MP to play Internet Radio stations, it must be connected to an Ethernet network which is routed to the Internet. Broadband Internet connections (DSL, Cable Modem, ISDN, T1, etc...) using an Internet “router” or “gateway” will provide the best iRadio sound quality and user experience.

If your FireBall server is connecting to the Internet using its built-in modem on a dialup ISP account, you will NOT be able to use the iRadio feature. This is due to the fact that the FireBall server is not a “router” and can not transfer iRadio streams to FireBall-MP clients.

Please refer to the Home Networking Chapters in this manual for more information on properly configuring your Ethernet network.

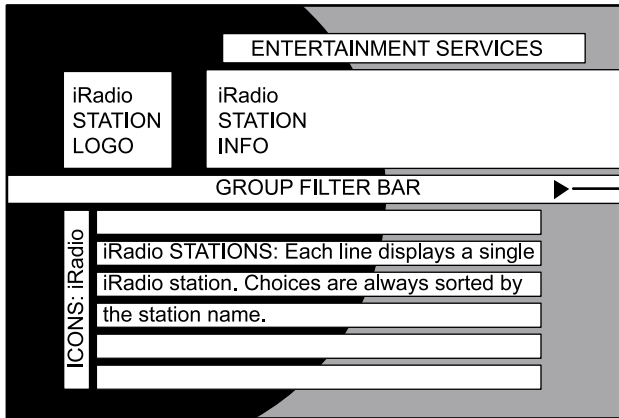


Entering iRadio Mode

Select the iRADIO key. FireBall-MP displays the Radio Guide view so that you can navigate and select an Internet Radio station to play.

Guide Screen Overview

Guides contain listings of content that can be selected for listening and assist you in finding and organizing your Internet radio stations.



The Group Filter Bar displays up to 5 iRadio Groups including **ALL**. If more than 5 groups exist an arrow appears after the last item



Navigating Among iRadio Stations

Use the UP and DOWN ARROW keys to move from one station to another. Use the RIGHT and LEFT ARROW keys to move between the groups in the Filter bar.

To change the stations in the guide one page at a time, use the PAGE UP and PAGE DOWN keys.

Playing an iRadio Station

To play a specific station, press SELECT (or PLAY) when that station is highlighted. The iRadio Player screen is displayed.

In the Player screen, to advance to the next or previous station without returning to the Radio Guide, use the PAGE UP and PAGE DOWN keys. The STOP key will stop the Internet Radio stream from playing. Pause will NOT pause the stream.



To maximize the enjoyment of this feature, a Broadband connection is required to avoid the “buffering and popping” experience associated with a slower connection. However, even a Broadband connection has factors (such as the number of users on the system or server capability) that may adversely affect your listening experience.



Changing iRadio Options

Press the OPTION key while in iRadio mode for the iRadio OPTIONS menu to appear.

This screen allows you to organize and access content based on stations and groups.

iRadio options are organized much like music options. In other words, after you select a specific option, sometimes a second or third screen is provided to refine your request.

The term GROUPS on the iRadio option screen refers to a collection of stations that are organized together so that you can easily find your favorite stations. Some groups are created automatically while others are created by you. The ALL groups contains all of the Internet Radio stations. Genre based groups are automatically setup for new stations as they are updated by Escient.



To Create a New iRadio Group

A group is a collection of content that classifies your stations to make them easier to find. Genre groups such as Jazz, and Country are automatically generated depending upon the current iRadio stations in your collection. The groups you create can be named whatever you want (i.e., My Favorites, Stuff, Talk).

- ❶ Press the iRADIO key on your remote or keyboard, and then press the OPTION key. Use the ARROW keys to highlight the **new group** button on the displayed panel and press the SELECT key.
- ❷ A screen displays so that you can enter the name for the new group.
- ❸ After you have entered the new name, press SELECT to continue.
- ❹ When the group name is saved, the screen transitions to the EDIT RADIO GROUP screen where you will select stations to be included in the new group. Cursor UP and DOWN to highlight the stations. A check mark indicates when a station is to be included in the group. Use the SELECT key to toggle between including or not including a station.
- ❺ Press the RECORD key to save the new group and exit the OPTION mode.



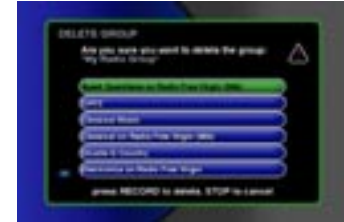
To Edit an iRadio Group

- ❶ Press the iRADIO key to show the Radio Guide.
- ❷ Use the RIGHT and LEFT ARROW keys to highlight the group you want to edit.
- ❸ Press the OPTION key. Use the ARROW keys to highlight the **edit group** button on the displayed panel and press the SELECT key.
- ❹ The EDIT GROUP screen displays which allows you to edit the name of the group. You do not have to edit the name of the group in order to modify the members of the group.
- ❺ Press the SELECT key to continue so that you can modify the stations in the group when the EDIT RADIO GROUP screen displays.
- ❻ Cursor UP and DOWN to highlight the stations. A check mark indicates when a station is to be included in the group. Use the SELECT key to toggle between including or not including a station.
- ❼ Press the RECORD key to save this group and return to the Guide.



To Delete an iRadio Group

- ❶ Press the iRADIO key to show the Radio Guide.
- ❷ Use the RIGHT and LEFT ARROW keys to highlight the group you want to delete.
- ❸ Press the OPTION key. Use the ARROW keys to highlight the **delete group** button on the displayed panel and press the SELECT key.
- ❹ The DELETE GROUP screen displays and shows the stations in the selected group.
- ❺ A dialog message displays asking for confirmation before the group is deleted. Press the RECORD key to delete the group.



delete group does not remove any of the underlying stations which remain available in the “ALL” group.

To Create a New iRadio Station

An iRadio station is an Internet link or “URL” to a radio stream. Creating a new iRadio station means manually entering a link to a known Internet Radio Stream. FireBall-MP can stream WMA V2, V7, and V8 formats, up to 192kbps.

- ❶ Press the iRADIO key on your remote or keyboard, and then press the OPTION key. Use the ARROW keys to highlight the **new station** button on the displayed panel and press the SELECT key.
- ❷ A screen displays so that you can enter the name, location, URL, speed, genre, and channels. (The cover art is selected based on the genre.) Enter the radio station stream's internet address into the URL field. For example: "http://www.streamaudio.com/stations/WXYZ.asf"
- ❸ After you have entered the new information, press RECORD to save the new station and return to the Radio Guide.
- ❹ To play the new station, highlight the station name in the Radio Guide, then press the PLAY key. If the URL is correct and the sever is up and running, you should hear the station playing in a few moments. If there is a problem with the stream, you will see the "Station Not Available" message.



If you are entering a URL for a new station, make sure it uses a WMA Internet radio stream.

New stations can be found on Internet sites such as www.radio-locator.com

To Edit an iRadio Station

- 1 Press the iRADIO key to show the Radio Guide.
- 2 Use the ARROW keys to highlight the station you want to edit.
- 3 Press the OPTION key. Use the ARROW keys to highlight the **edit station** button on the displayed panel and press the SELECT key.
- 4 The EDIT INTERNET STATION screen displays which allows you to edit the information for the station.
- 5 Press the RECORD key to save this station and return to the Guide.



To Delete an iRadio Station

- ❶ Press the iRADIO key to show the Radio Guide.
- ❷ Use the ARROW keys to highlight the station you want to delete.
- ❸ Press the OPTION key. Use the ARROW keys to highlight the **delete station** button on the displayed panel and press the SELECT key.
- ❹ The DELETE RADIO STATION screen displays and shows the station's name.
- ❺ Press the RECORD key to delete the station.
- ❻ A dialog message displays asking for confirmation before the station is deleted. Highlight the delete button and press the SELECT key to delete the station.



Supported iRadio Bitrates

FireBall-MP supports the following iRadio bitrates and sampling frequencies:

WMA-Audio V2, V7 and V8		
Bitrate	Sampling Frequency	Stereo/ Mono
5Kbps	8KHz	Mono
6Kbps	8KHz	Mono
8Kbps	8KHz	Mono
	11.025KHz	Mono
10Kbps	11.025KHz	Mono
	16KHz	Mono
12Kbps	16KHz	Mono
	8KHz	Stereo
16Kbps	16KHz	Mono
		Stereo
	22.05KHz	Mono

20Kbps	16KHz	Stereo
	22.05KHz	Mono
		Stereo
	32KHz	Mono
22Kbps	22.05KHz	Stereo
	32KHz	Stereo
32Kbps	22.05KHz	Stereo
	32KHz	Stereo
	44.1KHz	Mono
Stereo		
36kbps	32KHz	Stereo
40Kbps	32KHz	Stereo
44kbps	32 KHz	Stereo
48Kbps	32KHz	Stereo
	44.1KHz	Mono
		Stereo

64Kbps	32 KHz	Stereo
	44.1KHz	Stereo
80Kbps	44.1KHz	Stereo
96Kbps	44.1KHz	Stereo
128Kbps	44.1KHz	Stereo
	48KHz	Stereo
160Kbps	44.1KHz	Stereo
	48KHz	Stereo
192Kbps	44.1KHz	Stereo
	48KHz	Stereo

Chapter 7 - Customizing FireBall-MP

Two Ways to Customize FireBall-MP
To Change Network Settings
To Change Preferences
To Change Video Settings
To Change COM Port Settings
To Change Security Settings
To Access FireBall-MP Utilities



Two Ways to Customize FireBall-MP

There are two methods of customizing FireBall-MP: through the OPTIONS menu or through the SETUP Menu. The OPTIONS menu is used to customize features which need frequent changing during the normal operation of the system, while the SETUP menu provides access to general user preferences.

Use the OPTIONS menu for:

- Organizing access to content - managing groups, managing play lists, editing music information, deleting music, and looking up music information.
- Adjusting player controls - play modes (random, repeat, etc.)

Use the SETUP Menu to change:

- network settings
- preferences
- video
- com ports
- security
- utilities

These menus will be covered in this chapter.



The OPTIONS menu is discussed in Chapter 6: Managing Music.



To Change Network Settings

- ❶ Press the SETUP key on the remote control or keyboard. The FireBall-MP SETUP main menu displays.
- ❷ Select the menu item **internet configuration**. The menu displays.
- ❸ Select the sub-menu item you want to modify and follow the instructions on the screen.

ethernet settings - The Ethernet network can be configured Dynamically or Manually. Contact your system Administrator or ISP if you need help with these settings.

server connection - This option allows you to select which FireBall Server to connect to. Only 1 FireBall server connection is allowed at one time, for each FireBall-MP.

- ❹ Exit SETUP by selecting the EXIT menu item located at the bottom of the main menu, or by pressing the SETUP key when on the main menu or any sub-menu.



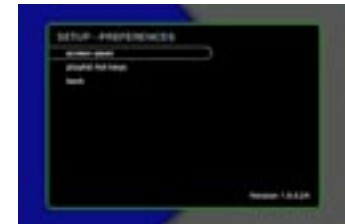
If you backspace at any point while in the password box, the entire password is erased.

To Change Preferences

- ❶ Press the SETUP key on the remote control or keyboard. The SETUP main menu displays.
- ❷ Select the menu item **preferences**. The menu displays.
- ❸ Select the sub-menu item you want to modify and follow the instructions on the screen.

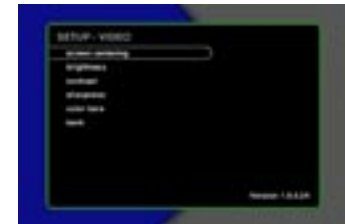
screen saver preferences - Specifies the number of minutes of inactivity allowed before the screen saver is activated and the screen saver mode. The default setting is 10 minutes. Selections you may choose from are 5, 10, 15, 30, or 60 minutes.

- ❹ Exit SETUP by selecting the EXIT menu item located at the bottom of the main menu, or by pressing the SETUP key when on the main menu or any sub-menu.



To Change Video Settings

- ❶ Press the SETUP key on the remote control or keyboard. The SETUP main menu displays.
- ❷ Select the menu item **video settings**. The menu displays.
- ❸ Select the sub-menu item you want to modify and follow the instructions on the screen.
 - screen centering** - Adjusts the horizontal placement of the FireBall-MP screen so that the generated computer image is centered horizontally on your TV.
 - brightness** - Use the brightness controls of your TV for optimum viewing.
 - contrast** - Use your display's contrast controls to help reduce video "blooming" while creating a clearer, more readable interface.
 - sharpness** - Sets the sharpness or detail control of your TV so that onscreen text is as readable as possible.
 - color bars** - Displays the SMPTE color bars. You may use this screen to test the display for color and tint accuracy.
- ❹ Exit SETUP by selecting the EXIT menu item located at the bottom of the main menu, or by pressing the SETUP key when on the main menu or any sub-menu.



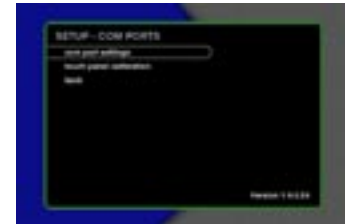
To Change Com Port Settings

- ❶ Press the SETUP key on the remote control or keyboard. The SETUP main menu displays.
- ❷ Select the menu item **com ports**. The menu displays.
- ❸ Select the sub-menu item you want to modify and follow the instructions on the screen.

com port settings - During the Quick Start setup, touchscreens attached to the communication ports were automatically detected. If you attach additional equipment use this screen to indicate which of the 2 com ports are used by an optional touch panel, external control system, or Elan system.

calibrate touch panel - Allows an attached ETP-1000 touch screen display device to be calibrated.

- ❹ Exit SETUP by selecting the EXIT menu item located at the bottom of the main menu, or by pressing the SETUP key when on the main menu or any sub-menu.

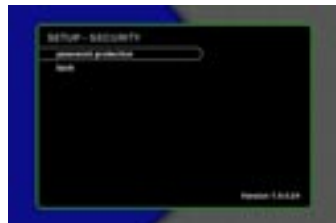


The LEFT, and RIGHT ARROW keys on the remote or keyboard are used to position the screen horizontally.

To Change Security Settings

- ❶ Press the SETUP key on the remote control or keyboard. The SETUP main menu displays.
- ❷ Select the menu item **security**. The menu displays.
- ❸ Select the sub-menu item you want to modify and follow the instructions on the screen.
password protection - Allows you to password protect access to the Setup functions. Subsequent access to setup will be password protected.

If you specify a password, you will be prompted when the SETUP key is pressed to enter the password. If the password entered matches the stored password, full access is granted until the next power OFF cycle. If the password does not match, you will be asked 2 more times to enter the correct password. If after the third try the password still does not match, you will not be able to access the FireBall-MP Setup menus.

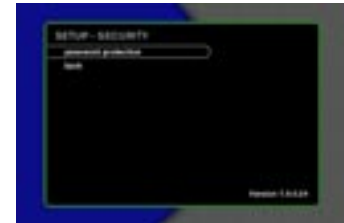


If you do not specify a system password, unrestricted access to the Setup Menu will be enabled. If security access is in place, a password will be required to access the Setup Menus the first time you press the SETUP key, after each Power On.

You are given the option of enabling password protection by entering a password and then verifying it. If you leave these fields blank, password protection will be disabled. Select a numeric only password and enter it twice for verification purposes. You can use the remote control or keyboard.

4

Exit SETUP by selecting the EXIT menu item located at the bottom of the main menu, or by pressing the SETUP key when on the main menu or any sub-menu.



To Access FireBall-MP Utilities

- ① Press the **SETUP** key on the remote control or keyboard. The **SETUP** main menu displays.
- ② Select the menu item **utilities**. The menu displays. (No other use of the system is permitted while one of the utility processes is running.)
- ③ Select the menu item you want to access and follow the instructions on the screen.
 - system reset** - performs a soft reset of the FireBall-MP. (This is the same as holding the front panel power button in for 4 seconds to reboot)
 - configuration information** - Displays the current FireBall-MP internal settings including software versions, hardware versions, serial number, customer ID, and network settings.
 - IR remote control** - allows you to control FireBall-MP using the FB, TB, or PP modes on the remote control. This is useful if you have more than one FireBall in the same room, so that all FireBalls do not respond to the same IR codes.
- ④ Exit **SETUP** by selecting the **EXIT** menu item located at the bottom of the main menu, or by pressing the **SETUP** key when on the main menu or any sub-menu.



Chapter 8 - Touch Screen Overview

Escient ETP Touch Screen Interaction
Elan VIA! Touch Panel Configuration



Escient ETP Touch Screen Interaction

This section describes how FireBall-MP can be controlled from the optional ETP Touch Screen. Contact your Escient Dealer for more information on the ETP Touch Screen.

When you initially setup FireBall-MP, you will need to use the remote or wireless keyboard to navigate through the automatic setup program called Quick Start. **Once you have gone through this setup, you will be able to calibrate FireBall-MP and use the Touch Screen.** (See the side note on this page for calibration info.)

There are a couple of differences between the guides and player screens that appear when using the touch screen device.

The Guide screen looks like this when no touch screen is in use.



The Player screen looks like this when no touch screen is in use.



If the touch screen does not seem to be centered or is otherwise not working, please use the remote or keyboard and press the SETUP key to go to the SETUP menu, choose **audio video and com ports, calibrate touch panel.**

Use the arrow keys to select the option "calibrate touch panel" and follow the instructions on the screen.

When an Escient touch screen is detected and powered on or the SETUP option for an external control system's XY coordinates is set, the touch screen buttons will appear on the Guide screen and the Player screen.



On the Guide screen a row of buttons appears on the right of the music content to let you play, stop, or record your music. Respectively, the stop, record, and all buttons will come in handy for canceling tasks, completing tasks, and toggling all tracks to be included or excluded. The page up and page down buttons allow you to scroll the guide one page at a time.



The default bar is the genres filter bar. The genres automatically scroll to the left and right when the leftmost or rightmost genre is selected if there are more genres to view.

Pressing the toggle button again will change the view from the alpha-numeric bar to the remote control button bar.



remote control
button bar

The remote control bar includes:

- Pause, Skip forward, and Skip backward transport controls
- Player - Show the Player screen
- Source - Toggle between Radio and Music source modes
- View - Changes the Music Guide View
- Options - Displays the Options Menu
- Favorites - Plays the Default Favorites Playlist
- Random - Plays the current Group in Random Play Mode

Pressing the toggle button once will change the view from the styles bar to the alpha-numeric bar. This bar lets you enter a letter or number to jump down to the music selection that begins with that letter. Pressing a letter will display the pressed letter in the on screen display area located between the two smoked glass windows at the top of the guide.



alpha-numeric bar



Escient Touch Panel

Selecting music to play or selecting the player button on the remote control button bar will present the Player screen. The Player screen appears with a toggle button when a touch screen is in use. The transport button bar is displayed when the toggle button is pressed again.

toggle button



transport button bar



Escent Touch Panel

The remote control button bar is displayed when the toggle button is pressed again.
remote control button bar



The Remote Control Button Bar includes:

- Guide - Show the Guide screen
- OpenGlobe - Go to the OpenGlobe Home screen
- Page Up/Down - scroll the Track list a page at a time
- Info - Display the Info screen
- Options - Display the Options menu screen
- Mode - Cycle through the Play Modes
- Add - Add the currently highlighted track to the Favorites Playlist
- Setup - Display the Setup menu



Escient Touch Panel

Elan VIA! Touch Panel Configuration

Using FireBall-MP with the Elan VIA! system is quite easy. You can use Elan System Controllers or direct VIA! touch panel connections. FireBall-MP uses a special screen overlay to provide VIA! touch panels with the required control points. You will need to have the latest VIA! Tools. Please contact Elan for more information.

Connect FireBall-MP to the Elan VIA! Touch Screen

- 1) Route the IR output of the VIA panels to either the direct IR port of the FireBall-MP (recommended) or use an emitter on the front of the FireBall-MP (IR receiver is located on the right hand edge of the display window).
- 2) Connect the video out of FireBall-MP to the VIA panel.
- 3) Using new version of VIA tools, select custom overlay template, and choose FireBall-MP as a component in the VIA panel

Configuring FireBall-MP for Elan VIA! control

- 1) Press SETUP->AUDIO VIDEO AND COM PORTS-> COM PORT SETTINGS.
- 2) Navigate to the IR FRAME button and press the SELECT key until the button is set to ENABLE
- 3) Navigate to the SAVE button and press the SELECT key.
- 4) Press SETUP to exit the setup menus. The Elan VIA! IR frame should now be visible on all video outs. Make sure the FireBall-MP video is being routed to the VIA panels.



**Music Guide Screen with
Elan VIA! IR Frame Overlay**

Appendix A - Cable Pin-Out Configurations

Pin configurations for RS-232 Cables to Control Systems



Pin Configurations for RS-232 Cables to Control Systems

FireBall-MP to AMX / Crestron / PHAST

FireBall-MP (DB9-Female)		AMX/Crestron/PHAST (DB9-Female)	
Pin	Function	Pin	Function
2	RD	3	TD
3	TD	2	RD
5	GND	5	GND



RS-232 cable between FireBall-MP and Control System must be 25 feet or less.

Appendix B - FireBall-MP Technical Specs

Video Specifications
Physical Specifications
Audio Specifications
Power Usage and Power Supply
3rd Party Certifications
FCC Part 15, Subpart B



Video Specifications

- NTSC
- 10 bit Video DACs
- Frequency Response:
- Composite: -2 dB @ 5MHz
- S-Video: -2 dB @ 5MHz
- SNR: 50 dB
- Crosstalk: 50 dB
- Input Impedance: 75Ohm
- Output Impedance: 75Ohm

Physical Specifications

Width: ~ 17 3/8"

Height: ~ 4 5/8" w/ feet; ~ 4" w/o feet

Depth: ~ 11 7/8"; Installed 14 3/8"



Audio Specifications

- Frequency Response: 2 – 20,000 Hz, ± 1 dB
- THD+N (playback) < -80 dB FS A (< 0.01%)
- A_D-DSP-D-A Dynamic Range: > 96 dB FS A @ 1kHz
- Channel Separation: >95 dB
- Full Scale Line Output: >2 Vrms, 50 k ohms
- S/PDIF Output: 0.4Vpp to 0.6Vpp, <0.05Vdc (75ohm terminated)
- Power Requirements: AC 90-132 VAC, 50-60 Hz
- Power Consumption: < 60 watts



Power Usage and Power Supply

- Open frame 60 Watt Supply
- Support for holding Power button for 4 seconds to force reset
- Full Power Off may be accomplished by removing the power cord from the wall power outlet
- Discrete Suspend (Sleep) and Resume (Wake up) commands
- Automatic Restore in the event of Power Loss
- UL/CUL recognized power supply

3rd Party Certifications

FCC: US Part 15, Class B

NTSC Video Output: NTSC RS-170A

cETL Listing

Part 68

Conforms to: UL STD 6500-2000

Certified to: CAN/CSA STD E60065-00

CE



FCC Part 15, Subpart B

Class B

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio TV technician for help.
- Shielded cables must be used with this unit to ensure compliance with the Class B FCC limits.



Appendix C - Minor Troubleshooting

Minor Troubleshooting Tips



Minor Troubleshooting Tips

Following are some easily resolved problems you may encounter during the installation of your FireBall-MP unit. If you are experiencing difficulties that do not appear in the following list, please contact your dealer, check the Escient Website, or contact Escient tech support.

No Power

FireBall-MP may be plugged into an unswitched AC power receptacle.

Power: but no video

Make sure FireBall-MP is connected to the video source (television) before you power on FireBall-MP. Make sure that the LED next to the Power button is not blinking. Following is the Power ON/Standby sequence.

After the FireBall-MP unit is plugged in, the Standby LED located next to the power button will flash until the startup process is complete. **This may take a few minutes.**

When the Standby LED is OFF, the FireBall-MP is now in a standby or “sleep” mode.

Press the Power button (on the front panel or on the remote) once and the video output and front panel display will turn on. The unit is now ON.

To change from the ON mode back to the standby or “sleep” mode, press the Power button on the front panel or on the remote once.



Remote LED does not blink when you press a key.

Replace the batteries with two (2) new AA alkaline batteries.

Remote LED blinks when you press a key, but home entertainment component does not respond

- Make sure the Remote is aimed at your home entertainment component and is not farther than 15 feet away.
- Check that the correct mode is selected (Press FB for FireBall-MP.)
- Replace the batteries in the remote control with two (2) new AA alkaline batteries.

Remote does not control home entertainment components or commands are not working properly

Try all listed codes for the component brands being set up. Make sure they can be operated with an infrared remote control.



Appendix D - External Control Protocol

- External Control Overview**
- Command / Response Overview**
- Unsolicited Status Events**
- Remote/Keyboard Commands**
- Database Commands**
- Status Commands**
- Control Commands**



External Control Overview

This appendix describes the external control protocol commands and responses which allow an external control system to navigate the Escient products, get library information to build custom user interfaces, perform transport controls, and receive unsolicited feedback on system status.

This information is intended for experienced custom installers and software developers. Please refer to the Escient Dealer Support area on the Escient website for further information about external control of FireBall-MP.



Commands and Responses Overview

The external control protocol is standard ASCII based. ESCX is the four letter preamble that is used for all commands. This preamble must be uppercase. The commands provided in this protocol allow an external control system to navigate the Escient products, get library information to build custom user interfaces, perform transport controls, and receive unsolicited feedback on system status.

All external control commands are made up of the preamble (ESCX), command group (01,02,10,20,50,70), sub command (specific task), specific data (# of data items, and a size of data packet then the actual data packet repeated for the # of data items), and a carriage return end marker.

External Control Command Structure

DESCRIPTION	PREAMBLE	COMMAND GROUP	SUB COMMAND	# DATA ITEMS	DATA ITEM #1 SIZE	DATA #1	DATA ITEM #2 SIZE	DATA #2	END MARKER
Bytes	4	2	2	3	4	5	4	3	1
Example	ESCX	01	08	002	0005	Hello	0003	Bye	Carriage Return

The external control commands are broken down into the following Command Groups:

- 01 – Command Responses
- 02 – Unsolicited Events
- 10 – Remote Button / Keyboard Commands
- 20 – Database Commands
- 50 – Status Commands
- 70 – Control Commands

All commands will cause one of the following response numbers to be issued. Some commands, such as database commands will also send back additional responses that contain more detailed information.

Command Responses

COMMAND GROUP	RESPONSE NUMBER	RESPONSE DESCRIPTION
01	01	OK
01	02	Bad Command Structure
01	03	Empty Library or Bad Range
01	04	Wrong Number of Command Arguments
01	05	Invalid Subcommand
01	06	Invalid Command
01	07	Not Available During Standby (deprecated)
01	08	Requested data not available
01	09	External control command not yet implemented (future)
01	10	Not Available at This Time

Response Format: ESCX01xx, where xx = Command response

Response 07 has been deprecated due to the new auto-on function. Whenever a valid command is received (with two exceptions), the system will automatically enter the “on” mode, if it is in standby. A client may still handle response 07, but it is no longer sent from the host for any reason.

Response 10 will be sent when a normally valid command is sent to the host, but it cannot be processed due to the system's mode. For example, a database play will not be processed while the system is in setup or options mode, autobuilding a changer, etc. Note that a keypress command will never return this response, as even audio transport keys (play, stop) have alternate functions in various modes.

Unsolicited status events can be sent to report the state changes of the Escient products. There are two currently defined message levels: 5 - track changes, and 10 - all (including 1-second playing time updates). Clients are registered at level 5 by default. Clients may change their message level using the ESCX7002 command. See the control commands section for instructions on how to register and unregister for unsolicited status event levels.

Unsolicited Status Events

COMMAND GROUP	EVENT NUMBER	EVENT DESCRIPTION
02	01	Power status changed. When the system has booted into an off state you will receive a "RDY" status indicating it is ready to be powered on and from then on an "OFF" or an "ON " status.
02		<i>Event Format:</i> ESCX02010010003xxx, Where xxx = a 3 character string "RDY" = when power is first applied and it boots into the off state (standby mode) – ready for power on. "ON " = if power on turned on (GUI appears) "OFF" = if power is off (standby mode) (Video out off)
02	02	Play Mode changed (normal, random, etc) [future implementation]
02		<i>Event Format:</i> ESCX0202, Where 02 = means the database has changed
02	03	Guide View changed
02		<i>Event Format:</i> ESCX02030010002xx Where xx = the new guide view 01 = Guide changed to Artist view CD titles are displayed sorted by artist name 02 = Guide changed to Titles view CD titles are displayed sorted by CD title 03 = Guide changed to Song view Song titles are displayed sorted by song title 04 = Guide changed to Cover view Covers are displayed sorted by artist then by title
02	04	Playing Artist/Title/Song has changed

02		<p><i>Event Format:</i> ESCX02040060002aa0003bbbccccdddeeefffgggghhhiiijj</p> <p>aa = the play state 01 = Play, 02 = Stop, 03 = Pause</p> <p>Radio only: 04 = Locating Station, 05 = Buffering data, 06 = Station Not Found</p> <p>bbb = current track number (0 if Radio Mode)</p> <p>cccc = length of artist name</p> <p>ddd = artist name</p> <p>eeee = length of title name</p> <p>fff = title name (station name if Radio Mode [future])</p> <p>gggg = length of track name</p> <p>hhh = track name</p> <p>jjj = current track time (0 if Radio Mode)</p> <p>The current track, artist name, title name, track name, and current track time are only returned for the play event. The stop and pause events just signify that the state has changed.</p>
02	05	Guide Mode changed (Playlist edit mode, Record mode, Delete mode, etc) [future implementation]
02	06	Screen Mode changed (Guide, Player, Options, Setup, etc) [future implementation]
02	07	Database has changed. The external control system should re-read the library information. [future implementation]
02	08	GUI to Movie. User switched to the Full screen movie. [future implementation]
02	09	Movie to GUI. User switched back to the FireBall-MP GUI from a movie. [future implementation]

The Remote Button / Keyboard commands are used when the video output of the FireBall-MP system is displayed on a TV or large screen projector and it is desired to directly select the FireBall-MP control functions through an external control system.

The up, down, left, right, and select functions can be used to navigate objects on the screen and select them. The active FireBall-MP control

function is highlighted and the selection cursor is moved over it.

Various other commands are used to mimic the operation of the remote control. Note that the command response will be "OK" as long as the key code is a valid one, even though the system may ignore the key if the system is in a mode where the key would not normally be processed.

Remote Button / Keyboard Commands

COMMAND GROUP	SUB COMMAND NUMBER	COMMAND DESCRIPTION
10	01	Left
10	02	Up
10	03	Right
10	04	Down
10	05	Select
10	06	Move To X and Y Coordinates and Select
10		The upper left point on the screen is (0,0) and the resolution of the screen is 720 by 480 pixels.
10		
10	07	Power Toggle
10	08	Power On
10	09	Power Off
10		
10	10	"0"
10	11	"1"
10	12	"2"
10	13	"3"
10	14	"4"
10	15	"5"
10	16	"6"
10	17	"7"
10	18	"8"
10	19	"9"
10	20	"~"
10	21	" "
10	22	"/"
10	23	" "
10	24	"?"
10	25	"@"
10	26	"_"

10	27	" "
10	28	" "
10	29	" "
10	30	Ch
10	31	Ch/Page +
10	32	Ch/Page -
10	33	Mode Increment – Only works in Player
10	34	Mode Play – Normal – Only works in Player
10	35	Mode Play – Repeat Track – Only works in Player
10	36	Mode Play – Repeat Title – Only works in Player
10	37	Mode Play – Repeat Group – Only works in Player
10	38	Mode Play – Random Title – Only works in Player
10	39	Mode Play – Random Group – Only works in Player
10	40	Setup
10	41	Option
10	42	Guide (toggles between Guide and Player) **
10	43	Guide Explicit (always goes to Guide) **
10	44	Player Explicit (always goes to Player) **
10	45	OpenGlobe
10	46	Info
10	47	Menu (DVD Menu and Guide View Increment)
10	48	Guide View – Covers
10	49	Guide View – Artist
10	50	Guide View – Title
10	51	Guide View – Song
10	52-53	Play a numbered playlist (argument has playlist number)
10	54	Not used
10	55	Play
10	56	Stop
10	57	Pause
10	58	Previous Track
10	59	Next Track
10	60	Record
10	61	Movies
10	62	Music
10	63	iRadio
10	64	Title
10	65	Angle
10	66	Resume
10	67	Next
10	68	Add Favorites
10	68	Play Favorites

10	69	Random
10	70	"A"
10	71	BACKSPACE
10	74	"B"
10	75	"C"
10	76	"D"
10	77	"E"
10	78	"F"
10	79	"G"
10	80	"H"
10	81	"I"
10	82	"J"
10	83	"K"
10	84	"L"
10	85	"M"
10	86	"N"
10	87	"O"
10	88	"P"
10	89	"Q"
10	90	"R"
10	91	"S"
10	92	"T"
10	93	"U"
10	94	"V"
10	95	"W"
10	96	"X"
10	97	"Y"
10	98	"Z"
10	99	"Z"

** This command does not function if the Options screen, OpenGlobe CE-Commerce screen, or Playlist Edit screens are displayed.

Command Format: ESCX10xx

- 01 – ESCX1001
- 02 – ESCX1002
- 03 – ESCX1003
- 04 – ESCX1004
- 05 – ESCX1005

06 – ESCX10**06**0020003**aaa**0003**bbb**
aaa = X coordinate
bbb = Y coordinate

10 – ESCX10**10**

20 – ESCX10**20**

21 – ESCX10**21**

22 – ESCX10**22**

etc...

51 – ESCX10**51**0010001**x**

x = Playlist number (1 – 6)

All the Database commands are available regardless of the power state, except for Command 05, Play which will return an error response if attempted during standby. The groups, styles, and custom genres are grouped into system groups and user groups. The system groups have system groupings such as the All group, MP3 group, and Playlists groups. The user groups contain the genres for your music and your custom genres that have been created. The All radio station group and the NetRadio group are contained in the radio system groups while all other radio stations are in the system group. Titles are returned listed in alphabetical order by title regardless of the state of the user interface.

Database Commands

COMMAND GROUP	SUB COMMAND	DESCRIPTION
20	01	Get number of groups (genres) in the database

20		<p>ESCX20010010002xx</p> <p>xx = which list to get groups from, where 01 = System Music Groups 02 = User Music Groups 03 = System Radio Groups 04 = User Radio Groups</p> <p><i>Reply Format:</i> ESCX20010010004xxxx, Where xxxx = total number of groups in the specified list</p> <p>Once the total number of groups is known, you can ask information for a range of groups using the 02 subcommand</p>
20	02	Get group information
20		<p>ESCX20020030002aa0004bbbb0004cccc</p> <p>aa = which list to get groups from, where 01 = System Music Groups 02 = User Music Groups 03 = System Radio Groups 04 = User Radio Groups</p> <p>bbbb = starting group number cccc = ending group number</p>
20		<p><i>Reply Format:</i> ESCX2002xxxGROUP1GROUP2etc..., Where xxx = total number of groups multiplied by 2, Each group is made up two items so</p>
20		<p>GROUP1 above = 0003xxxyyyyzzzzzzzz where 0003 = length of item #1 (always 3) xxx = number of titles in the group yyyy = length of item #2 (length of group name) zzzzzzzz = group name (length depends on yyyy)</p> <p>GROUP2, etc... have the same format as GROUP1</p>

20	03	Get title (music or movie) or station (radio) information (includes Playlists because they are virtual CD titles)
20		<p>ESCX20030040002aa0004bbbb0004cccc0004dddd</p> <p>aa = which list to get groups from, where 01 = System Music Groups 02 = User Music Groups 03 = System Radio Groups 04 = User Radio Groups</p> <p>bbbb = group number to get titles for cccc = starting title number dddd = ending title number</p>
		<p><i>Reply Format:</i> ESCX2003xxx1TITLE1TITLE2etc..., Where xxx = total number of titles multiplied by 2, Each title is made up of two items so</p>
		<p>TITLE1 above = 0003xxxyyyzzzzzzzzzz</p> <p>0003 = length of item #1 (always 3) xxx = number of tracks in the title (0 for Radio) yyyy = length of item #2 (length of title) zzzzzzzzzz = title/radio station (length depends on yyyy)</p>
		TITLE2, etc... have the same format as TITLE1
20	04	Get track information
20		<p>ESCX20040050002aa0004bbbb0004cccc0004dddd0004eeee</p> <p>aa = which list to get groups from, where 01 = System Music Groups 02 = User Music Groups</p> <p>bbbb = group number to get tracks for cccc = title number to get tracks for dddd = starting track number eeee = ending track number</p>
		<p><i>Reply Format:</i> ESCX2004xxx1TRACK1TRACK2etc..., Where xxx = total number of tracks, Each TRACK is made of one item so</p>

		<p>TRACK1 = bbbbzzzzzz yyyy = length of track name zzzzzz = track name (length depends on yyyy) TRACK2, etc... have the same format as TRACK1</p>
20 20	05	<p>Play music track/radio station/Playlist ESCX20050040002aa0004bbbb0004cccc0004dddd aa = which database to get groups from, where 01 = System Music Groups 02 = User Music Groups 03 = System Radio Groups 04 = User Radio Groups bbbb = group number cccc = title/station number dddd = track number (ignored for radio)</p>
20 20	06	<p>Get group number for a specific music or radio genre by name. ESCX20060020002aa0004bbbb aa = which list to get groups from, where 01 = System Music Groups 02 = User Music Groups 03 = System Radio Groups 04 = User Radio Groups bbbb = which group you want the number for 0004 is the length of the group name</p>
20		<p>01 - System Music group name examples are: All, Playlists, CDs, MP3s</p>

20		02 -User Music group name examples are: Blues/Folk Classical Country Dance Easy Listening Family HipHop-Rap Jazz Latin New Age Other Pop R&B/Soul Rock Soundtracks
20		03 - System iRadio group name examples are: All, NetRadio

20		<p>04 - User iRadio group name examples are:</p> <ul style="list-style-type: none"> Alternative Classic Rock Classical Country Eclectic Hip Hop Holiday International Jazz New Age Oldies R&B Religious Soft Rock News/Talk Top 40 Rock Other
20		<p><i>Reply Format:</i> ESCX20060010004xxxx, Where xxxx = group number for the group specified by aaaa Once group number is known, use the 02 subcommand for info.</p>
20	07	<p>Get title (music or movie) or station (radio) information by name (includes Playlists also, because they are virtual CD titles). Partial strings can be used. Case does not matter.</p>

20		<p>ESCX20070030002aa0004bbbb0004cccc aa = which list to get groups from, where 01 = System Music Groups 02 = User Music Groups 03 = System Radio Groups 04 = User Radio Groups bbbb = group number to get titles for cccc = which title/station/Playlist you want the number for 0004 is the length of the title/station/Playlist name</p>
		<p><i>Reply Format:</i> ESCX2007xxxTITLE1TITLE2etc..., Where xxx = total number of titles/station/Playlists that match Multiplied by 2, each title is made up of two items so</p>
		<p>TITLE1 above = 0003xxx0004yyyy 0003 = length of item #1 (always 3) xxx = number of tracks in the title/station/Playlist (0 for Radio) 0004 = length of item #2 (always 4) zzzz = title/station/Playlist number</p>
		<p>Most likely only one title will be returned for this command, however if you have duplicate titles, TITLE2, etc... have the same format as TITLE1</p>
		<p>Once the title/station/Playlist number and the number of tracks are known you can use the 04 – Get track information command or the 05 – Play music track/radio station/Playlist command.</p>

Status Commands

COMMAND GROUP	SUB COMMAND	DESCRIPTION
50	01	Get power state

50		<p>ESCX5001</p> <p><i>Reply Format:</i> ESCX50010010003xxx, Where xxx = a 3 character string "ON " if power on "OFF" if power is off (standby mode)</p>
50	02	Get music play mode
50		<p>ESCX5002</p> <p><i>Reply Format:</i> ESCX50020010002xx, Where xx = music play mode, where 01 = normal 02 = repeat track 03 = repeat title 04 = repeat group 05 = random title 06 = random group</p>
50	03	Get sort order [future implementation]
50		<p>ESCX5003</p> <p><i>Reply Format:</i> 'ESCX50030010002xx, Where xx = guide sort order, where 01 = by artist 02 = by title 03 = by song</p>
50	04	Get current playing artist, title, song [future implementation]

50		<p>ESCX5004</p> <p><i>Reply Format:</i> 'ESCX5004003aaaabbccccdeeeeff, where aaaa = length of the artist name that is playing bb = artist name – length depends on aaaa cccc = length of the title that is playing dd = music title – length depends on cccc eeee = length of the song that is playing ff = song title – length depends on eeee</p>
50	05	Get current screen that is displayed in the GUI [future implementation]
50		<p>ESCX5005</p> <p><i>Reply Format:</i> 'ESCX50050010002xx, Where xx = current GUI screen, where 01 = guide 02 = player 03 = options 04 = configuration</p>

Control Commands

COMMAND GROUP	SUB COMMAND	DESCRIPTION
70	01	Select guide source
70		<p>ESCX70010010002xx xx = guide source, where 01 = Music 02 = iRadio 03 = Movies</p>
70	02	Register for unsolicited events (by default you are registered to receive the unsolicited events for level 5)

70		<p>ESCX7002 ESCX70020010002xx xx = event level, where 05 = All events except 1-second updates while playing 10 = All level 5 events, plus one-second track playing time updates during music play</p> <p>If the short version of the command is used, event level 5 will be used as the default level.</p>
70	03	Unregister for unsolicited events (prevent unsolicited events)
70		ESCX7003
70	04	Set Music Play Mode
70		<p>ESCX70040010002xx xx = music play mode, where 01 = normal 02 = repeat track 03 = repeat title 04 = repeat group 05 = random title 06 = random group</p>

Note that when the host is in power standby mode, any command will cause the unit to enter the power on mode before executing the command. There are two exceptions to this: a client may register and unregister for unsolicited events without turning the host on, and the Status Command "Get Power State" (ESCX5001) will return the current state of the unit without turning it on.

Appendix E - FireBall- MP Internet Connections



When Does FireBall-MP Connect To Internet?

FireBall-MP is designed to automatically connect and disconnect from the Internet as needed through your Ethernet network. **If your FireBall Server is connected to the Internet using its internal modem, you will NOT be able to access Internet Radio or the OpenGlobe Entertainment features.**

iRadio:

Each time an iRadio Station is selected, FireBall-MP will automatically connect to the Internet to begin streaming the audio. The status of the connection followed by the audio streaming bit rate are displayed in the lower left portion of the iRadio Player. The Internet radio stream can be manually terminated by pressing STOP.

OpenGlobe CE-Commerce:

Each time you press the OpenGlobe (OG) button on the remote or IR Keyboard, an Internet connection is automatically established with the OpenGlobe service – unless a connection had previously been established.



Appendix F - Enhanced Entertainment Services

Enhanced Entertainment Services using Escient's
OpenGlobe Services



Enhanced Entertainment Services Using Escient's OpenGlobe Services

Escient provides Entertainment Services that are noted under the name of OpenGlobe™. These are provided to you within your FireBall-MP™ to expand your music experience.

The OpenGlobe area is an area within your FireBall-MP user interface that provides additional content or information related to the music you have stored on, or are listening to on your FireBall-MP.

For example, while listening to a Music Title or navigating through the onscreen music guide, you can simply press the OG button on your remote, keyboard or an optional touch screen, and immediately move to the OpenGlobe page on the Internet that contains a list of the week's top CD's in your favorite categories.

Or, you might want to access the latest info on one of your favorite artists and see their musical influences or read their biography.

As these services evolve, and new services are featured, you will be able to take advantage of the latest entertainment services offerings to enhance your music listening experience. You can purchase CDs now, and at some point, we hope to expand on these services to perhaps even offer the ability to download music, rather than having to wait for them in the mail.



As new services, peripherals, ISPs, applications, and user interface software are developed, FireBall-MP will access the updated software via the Internet connection, and provide you with the most current services and software. (Software is downloaded to your system automatically during regularly scheduled connections so you always have the latest software. You must be “connected” for this to occur.)

Appendix G - Home Networking

What is Home Networking?
Direct Connection to a FireBall Server
Connecting to an Ethernet Network



What is Home Networking?

A network is a group of computers, printers, and other devices that are cabled together in specific ways so that information can be exchanged and shared with each other. Just as you can connect two computers to share files or use the same connection to the Internet, you can connect FireBall-MP(s) to a home network so that you can share the digital music contained on each unit.

Home networks are relatively easy to set up and installation tutorials are readily available on the Internet. Basically there are three popular kinds of home networks: Ethernet, wireless (802.11) and HomePNA (HPNA). Each of these home networking standards require different boards or adapter installed on your PC(s), associated software, and cables to connect.

In an Ethernet configuration, Ethernet network interface boards are installed on your PC(s) and Ethernet cables are used to connect all equipment.

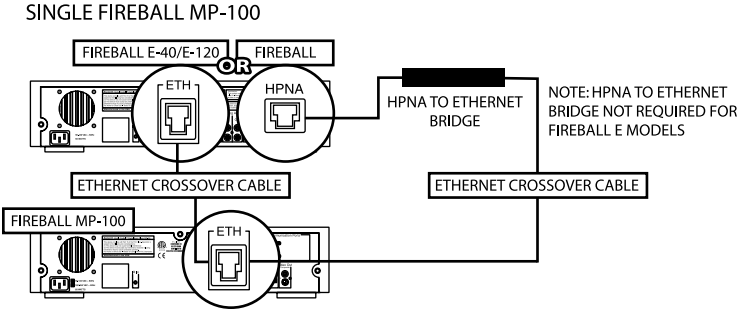
The FireBall-MP contains built-in Ethernet capabilities.

Direct Connection to a FireBall Server

The simplest way to connect a FireBall-MP client to a FireBall Server is to use a special Ethernet cables commonly called a “crossover” cable.

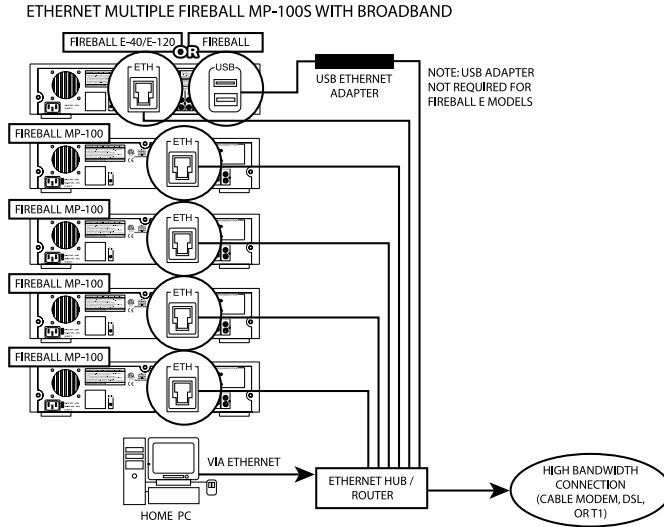
Connect one end of the Ethernet crossover cable to the Ethernet port on the back of the FireBall Server and the other end to the Ethernet port on the back of the FireBall-MP.

If your FireBall Server is an older FireBall model without built-in Ethernet, you will have to obtain an optional HPNA to Ethernet bridge such as the Escient HPNA Broadband Kit. Please contact your Escient dealer.



Connecting to an Ethernet Network

FireBall-MP can operate on any standard Ethernet network. Most Ethernet networks are connected together using a device called a “router”, “hub”, or “personal gateway”. Your FireBall Server and your FireBall-MP Clients must be connected to the same Ethernet network. You can have an unlimited number of FireBall-MP clients, however, each FireBall Server can only stream to four (4) clients at one time. Each Fireball-MP can only connect to 1 server at a time.



Appendix H - Remote Control

- Installing Batteries Into Remote**
- Programming the Remote**
- Programming TV/VCR Combo**
- Searching for Your Code**
- Checking the Codes**
- Re-Assigning Device Keys**
- Changing Volume Lock**
- Manufacturer's IR Codes**



Installing Batteries Into Remote

1. On the back of the Remote, push the tab and remove the battery cover.
2. Obtain two (2) fully-charged AA alkaline batteries. Match the + and – marks on the batteries to the + and – marks in the battery case, then insert the new batteries.
3. Press the battery cover back into place. The tab should click when the cover is locked.
4. Test the unit by pressing any key on the remote. If the batteries are inserted correctly, the LED will blink each time you press a key.

Programming the Remote

The Remote can control up to 8 different components. Note that 3 of these are already reserved for Escient's FireBall-MP, TuneBase 200, and PowerPlay products. Perform the following instructions for each component you want controlled:

1. Turn on a component (e.g., VCR) and, if applicable, insert media, (e.g., cassette or disc). NOTE: Please read steps 2-4 completely before proceeding. We recommend highlighting or writing down the codes and device you wish to program before moving onto step 2.
2. On the Remote, press a component key once (i.e., AUX, CBL, DVD, TV, RCV). Press and hold CODE SET until the LED blinks twice, then release.
3. Use the Manufacturer's Codes (last section in this appendix) to locate the type of component and brand name and then enter the first four-digit code for your component. If performed correctly, the LED will blink twice.



When batteries need replacement, the Remote will blink twice with every key press. Simply replace them and the remote control will be restored to its full functionality, including favorite settings.

If the LED did not blink twice, then repeat steps 2 through 3 and try entering the same code again.

4. Aim the Remote at the component and press PWR once. It should turn off. If it does not respond, repeat steps 2-3, trying each code for your brand until you find one that works. If the device does not have a PWR key, press PLAY.
5. Repeat steps 1 through 4 for each component you want the Remote to control.

Programming TV/VCR Combo

1. Turn on the TV/VCR Combo and insert a video cassette. NOTE: Please read steps 2-4 completely before proceeding. We recommend highlighting or writing down the code for the brand you wish to program before moving onto step 2.
2. On the Remote, press DVD. Press and hold CODE SET until the LED blinks twice, then release CODE SET.
3. Use the Setup Codes For TV/VCR Combos (last section in this appendix) to locate the brand name and then enter the first four-digit code for your component. If performed correctly, the LED will blink twice. NOTE: If the LED did not blink twice, then repeat steps 2 through 3 and try entering the same code again.
4. Aim the Remote at the component and press PWR once. It should turn off. If it does not respond, repeat steps 2-3, trying each code for your brand until you find one that works. If it still does not work, try searching for the code (see Searching For Your Code). NOTE: If the device does not have a PWR key, press PLAY.
5. If you've located a setup code that works, but it has a separate TV code, you'll also need to program it into the Remote to access volume control as follows:



- a. Press TV once. The LED will blink twice.
- b. Enter the TV code for your TV/VCR Combo. If correct, the LED will blink twice.

If there is no separate TV code listed, you will need to perform the following steps to access volume control:

- a. Press and hold CODE SET until the LED blinks twice, then release CODE SET.
- b. Enter 9 - 9 - 3 . The LED will blink twice.
- c. Press DVD once. The LED will blink twice.

Searching for Your Code

If your device does not respond to the Remote after trying all codes listed for your brand, or if your brand is not listed at all, try searching for your code. For example, to search for a code for your TV:

1. On the Remote, press TV once.
2. Press and hold CODE SET until the LED blinks twice, then release CODE SET .
3. Enter 9 - 9 - 1. The LED will blink twice.
4. Aim the remote control at the TV and slowly alternate between pressing PWR and TV. Stop when the TV turns off. NOTE: In the search mode, the Remote will send IR codes from its library to the selected device, starting with the most popular code first.
5. Press CODE SET once to lock in the code.
6. To search for the codes of your other components, repeat steps 1 through 5, but



substitute the appropriate key (i.e., AUX, CBL, DVD, RCV) for the (Auxiliary, VCR, Cable, Satellite, CD, Amplifier, or Tuner) component you are searching for.

Checking the Codes

If you have set up the Remote using the Searching For Your Code procedure, you may need to find out which four-digit code is operating your equipment.

For example, to find out which code is operating your TV:

1. On the Remote, press TV once.
2. Press and hold CODE SET until the LED blinks twice, then release CODE SET .
3. Enter 9 - 9 - 0. The LED will blink twice.
4. To view the code for the first digit, press 1 once. Wait 3 seconds, count the LED blinks (e.g., 3 blinks = 3) NOTE: If a code digit is "0", the LED will not blink.
5. Repeat step 4 three more times for remaining digits. Use 2 for the second digit, 3 for the third digit, and 4 for the fourth digit.
6. To check for the codes of your other components, repeat steps 1 through 5, but substitute the appropriate key (i.e., AUX, CBL, DVD, RCV) component you are checking. As before, write down each four-digit code.



Re-Assigning Device Keys

The Remote can be set up to control a second TV or VCR, or any combination of eight home entertainment components. For example, to have the Remote control a TV, a Cable Converter, and two VCRs, you will need to reassign the unused AUX key to operate the second VCR as follows:

1. On the Remote, press and hold CODE SET until the LED blinks twice, then release CODE SET .
2. Enter 9 - 9 - 2. The LED will blink twice.
3. Press DVD once, then press AUX once.
4. The AUX key is now ready to be programmed for your VCR. See Programming Component Control. To reassign other device keys, repeat steps 1 through 4 by substituting the key sequence from the below chart for the most popular components:

To Re-Assign Key Sequence

TV as VCR key:
 TV as 2nd CBL key:
 TV as 2nd AUX key:
 TV as 2nd RCV/TNR key:
 TV as AMP key:
 TV as CD key:
 TV as SAT key:

Perform

CODE SET - 9 - 9 - 2 - DVD - TV
 CODE SET - 9 - 9 - 2 - CBL - TV
 CODE SET - 9 - 9 - 2 - AUX - TV
 CODE SET - 9 - 9 - 2 - RCV - TV
 CODE SET - 9 - 9 - 2 - PP - TV
 CODE SET - 9 - 9 - 2 - TB - TV
 CODE SET - 9 - 9 - 2 - FB - TV



You cannot re-assign the FB, TB, or PP keys.

However, the keys can be used in conjunction to re-assigning other device keys.

To Re-Assign Key Sequence

DVD as 2nd TV key:
 DVD as 2nd CBL key:
 DVD as 2nd AUX key:
 DVD as 2nd RCV/TNR key:
 DVD as AMP key:
 DVD as CD key:
 DVD as SAT key:
 DVD back to DVD/VCR:
 AUX as 2nd TV key:
 AUX as 2nd DVD/VCR key:
 AUX as 2nd CBL key:
 AUX as 2nd RCV/TNR key:
 AUX as AMP key:
 AUX as CD key:
 AUX as SAT key:
 AUX back to AUX:

Perform

CODE SET - 9 - 9 - 2 - TV - DVD
 CODE SET - 9 - 9 - 2 - CBL - DVD
 CODE SET - 9 - 9 - 2 - AUX - DVD
 CODE SET - 9 - 9 - 2 - RCV - DVD
 CODE SET - 9 - 9 - 2 - PP - DVD
 CODE SET - 9 - 9 - 2 - TB - DVD
 CODE SET - 9 - 9 - 2 - FB - DVD
 CODE SET - 9 - 9 - 2 - DVD - DVD
 CODE SET - 9 - 9 - 2 - TV - AUX
 CODE SET - 9 - 9 - 2 - DVD - AUX
 CODE SET - 9 - 9 - 2 - CBL - AUX
 CODE SET - 9 - 9 - 2 - RCV - AUX
 CODE SET - 9 - 9 - 2 - PP - AUX
 CODE SET - 9 - 9 - 2 - TB - AUX
 CODE SET - 9 - 9 - 2 - FB - AUX
 CODE SET - 9 - 9 - 2 - AUX - AUX

When a reassignment is done, the LED will blink twice to confirm your choice. At that time, you will need to program the Remote to control the new component (see Programming Component Control).



Changing Volume Lock

The Remote is set to control volume of a component through your TV while in the TV, VCR, Cable, or Satellite mode. However, in an Audio mode (i.e. RCV/TNR; AMP, CD), you have separate control of your audio component's volume.

If your TV is not remote controllable, or if you want volume to be controlled by a different component, you can change the Volume Lock setting to control a volume through a non-associated mode (e.g., through the cable in the TV mode).

To change Volume Lock to another mode:

1. On the Remote, press and hold CODE SET until the LED blinks twice, then release CODE SET .
2. Enter 9 - 9 - 3 and then press any mode key once (except TV). The LED will blink twice.
3. Now, whenever you press VOL +, VOL -, or MUTE, volume will be controlled by your mode choice.

To change Volume Lock back to the TV mode:

1. On the Remote, press and hold CODE SET until the LED blinks twice, then release CODE SET .
2. Enter 9 - 9 - 3 and then press TV. The LED will blink twice.
3. Now, whenever you press VOL +, VOL -, or MUTE on the Remote, volume will be controlled by your TV.



Manufacturer's IR Codes

Setup Codes for TVs:

AOC 0030, 0019
 Admiral 0093, 0463
 Aiko 0092
 Akai 0030
 Alaron 0179
 Ambassador 0177
 America Action 0180
 Ampro 0751
 Anam 0180
 Audiovox 0451, 0180, 0092, 0623
 Baysonic 0180
 Belcor 0019
 Bell & Howell 0154, 0016
 Bradford 0180
 Brockwood 0019
 Broksonic 0236, 0463
 CXC 0180
 Candle 0030, 0056
 Carnivale 0030
 Carver 0054
 Celebrity 0000
 Cimeral 0451, 0092
 Citizen 0060, 0030, 0056, 0039, 0092
 Concerto 0056
 Contec 0180
 Craig 0180
 Crosley 0054
 Crown 0180, 0039
 Curtis Mathes 0047, 0054, 0154, 0051, 0451, 0093,
 0060, 0030, 0145, 0056, 0016, 0039,
 0166, 0466, 1147, 1347
 Daewoo 0451, 0019, 0039, 0092, 0623, 0624
 Daytron 0019
 Denon 0145

Dumont 0017, 0019
 Dwin 0720, 0774
 Electroband 0000
 Emerson 0154, 0236, 0463, 0180, 0282, 0178,
 0019, 0179, 0039, 0177, 0623, 0624
 Envision 0030
 Fisher 0154
 Fujitsu 0179
 Funai 0180, 0179, 0171
 Futuretech 0180
 GE 0047, 0051, 0451, 0093, 0282, 0178,
 0021, 0135, 1147, 1347
 Gibraltar 0017, 0030, 0019
 GoldStar 0030, 0178, 0019, 0056
 Gradiente 0053, 0056
 Grunpy 0180, 0179
 Hallmark 0178
 Harley Davidson 0179
 Harman/Kardon 0054
 Harvard 0180
 Hitachi 0145, 0056, 0151
 Infinity 0054
 Inteq 0017
 JBL 0054
 JCB 0000
 JVC 0053
 KEC 0180
 KTV 0180, 0030, 0039
 Kenwood 0030, 0019
 LG 0056
 LXI 0047, 0054, 0154, 0156, 0178
 Logik 0016
 Luxman 0056
 MGA 0150, 0030, 0178, 0019
 MTC 0060, 0030, 0019, 0056
 Magnavox 0054, 0030, 0179
 Majestic 0016
 Marantz 0054, 0030
 Matsushita 0250
 Megatron 0178, 0145

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Admiral 0048,0209
 Adventura 0000
 Aiko 0278
 Aiwa 0037, 0000
 Akai 0041
 America Action 0278
 American High 0035
 Asha 0240
 Audiovox 0037
 Beaumark 0240
 Bell & Howell 0104
 Brocksonic 0209
 Broksonic 0184, 0121, 0209, 0002
 CCE 0072, 0278
 Calix 0037
 Canon 0035
 Carver 0081
 Cinerall 0278
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 Colt 0072
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 Dynatech 0000
 Electrohome 0037
 Electrophonic 0037
 Emerex 0032
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 Fisher 0047, 0104
 Fuji 0035, 0033
 Funai 0000
 GE 0060, 0035, 0048, 0240
 Garrard 0000
 Go Video 0526
 GoldStar 0037, 0038
 Gradiente 0000
 HI-Q 0047

Harley Davidson 0000
 Harman/Kardon 0081, 0038
 Harwood 0072
 Headquarter 0046
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 Hughes Net. Sys. 0042
 JVC 0067, 0041
 Jensen 0041
 KEC 0037, 0278
 KLH 0072
 Kenwood 0067, 0041, 0038
 Kodak 0035, 0037
 LXI 0037
 Lloyd's 0000
 Logik 0072
 MEI 0035
 MGA 0240, 0043
 MGN Technology 0240
 MTC 0240,0000
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 Symphonic 0000
 TMK 0240
 Tatung 0041
 Teac 0000, 0041
 Technics 0035, 0162
 Teknika 0035, 0037, 0000

Thomas 0000
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 Unitech 0240
 Vector 0045
 Vector Research 0038
 Video Concepts 0045
 Videosonic 0240
 Wards 0060, 0035, 0048, 0047, 0081, 0240, 0000, 0042, 0072, 0149
 White Westinghouse 0209, 0278
 XR-1000 0035, 0000, 0072
 Yamaha 0038
 Zenith 0039, 0000, 0209, 0033
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 American High 0035 (for TV use 0051)
 Broksonic 0002, 0294,
 Colt 0072
 Curtis Mathis 0035 (for TV use 0051)
 Daewoo 0278
 Emerson 0002, 0294, 0479
 Funai 0000
 GE 0035 (for TV use 0051),
 0060 (for TV use 0047),
 0048 (for TV use 0093), 0240
 Hitachi 0035 (for TV use 0051), 0000
 HQ 0000
 Lloyds 0000
 MGA 0240
 Magnavox 0081 (for TV use 0054),
 0035 (for TV use 0051), 0000
 Magnin 0240
 Memorex 0037, 0162 (for TV use 0250)
 Mitsubishi 0048 (for TV use 0093)
 Orion 0002, 0294, 0479
 Panasonic 0035 (for TV use 0051),
 0162 (for TV use 0250)
 Penney 0035 (for TV use 0051), 0240,
 0162 (for TV use 0250)
 Quasar 0035 (for TV use 0051),

0162 (for TV use 0250)
 RCA 0060 (for TV use 0047),
 0035 (for TV use 0051),
 0048 (for TV use 0093)
 Sansui 0000, 0479
 Sanyo 0240
 Sears 0000, 0037
 Sharp 0048 (for TV use 0093)
 Sony 0032 (for TV use 0000)
 Symphonic 0000
 Zenith 0000
 Setup Codes for Cable Converters:
 ABC 0003,0008, 0014, 0017, 0007, 0011,
 0013
 Allegro 0153, 0315
 Archer 0153, 0797
 Bell & Howell 0014
 Century 0153
 Citizen 0153, 0315
 Comtronics 0040
 Contec 0019
 Eastern 0002
 Emerson 0797
 Everquest 0015,0040
 Focus 0400
 Garrard 0153
 Gemini 0015
 General Instrument 0476, 0276, 0011, 0810
 GoldStar 0144, 0040
 Goodmind 0797
 Hamlin 0020, 0259, 0009, 0034
 Hitachi 0011
 Hytex 0007
 Jasco 0015, 0153, 0315
 Jerrold 0003, 0012, 0476, 0276, 0014, 0015,
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 Memorex 0000
 Movie Time 0063
 NSC 0063
 Oak 0019, 0007

Optimus 0021
 Panasonic 0000, 0107, 0021
 Paragon 0000
 Philips 0153
 Pioneer 0144, 0533
 Popular Mechanics 0400
 Pulsar 0000
 Quasar 0000
 RCA 0021
 Radio Shack 0015, 0315, 0797, 0883
 Recoton 0400
 Regal 0020, 0259
 Regency 0002
 Rembrandt 0011
 Runco 0000
 SL Marx 0040
 Samsung 0144, 0040
 Scientific Atlanta 0008, 0477, 0017, 0877
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 Teleview 0040
 Tocom 0012, 0013
 Toshiba 0000
 Tusa 0015
 Unika 0153
 United Artists 0007
 Universal 0153, 0191
 Viewstar 0063
 Zenith 0000, 0525
 Zentek 0400
**Setup Codes for Satellite or
 DBS Receivers:**
 AlphaStar 0772
 Chaparral 0216
 EchoStar 0775

ExpressVu 0775
 General Instrument 0627, 0361, 0869
 HTS 0775
 Hitachi 0819
 Hughes Net. Sys. 0749
 JVC 0775
 Jerrold 0627, 0361
 Magnavox 0724, 0722
 Memorex 0724
 Next Level 0869
 Panasonic 0701
 Philips 0724, 0722
 Primestar 0627, 0361
 RCA 0566, 0143, 0392, 0855
 Radio Shack 0869
 Realistic 0052
 Sony 0639
 Star Choice 0869
 Toshiba 0790
 Uniden 0724, 0722, 0052
 Zenith 0856
 Setup Codes for CD Players:
 Aiwa 0157, 0124
 Burmester 0420
 California Audio Lab 0029
 Carver 0157, 0179, 0437
 DKK 0000
 Denon 0003, 0873
 Emerson 0305
 Fisher 0179,0174
 Garrard 0420, 0393
 Genexxa 0032, 0305
 Harman/Kardon 0157, 0173
 Hitachi 0032
 JVC 0072
 Kenwood 0028, 0037, 0190, 0681, 0826
 Krell 0157
 LXI 0305
 Linn 0157
 MCS 0029

MTC 0420
 Magnavox 0157, 0305
 Marantz 0029, 0157, 0180
 Mission 0157
 NSM 0157
 Nikko 0174
 Onkyo 0101, 0868
 Optimus 0000, 0032, 0179, 0305, 0037, 0420,
 0145, 0468, 0437
 Panasonic 0029, 0303
 Parasound 0420
 Philips 0157, 0626
 Pioneer 0032, 0305, 0468, 0244
 Proton 0157
 QED 0157
 Quasar 0029
 RCA 0179, 0305, 0053, 0764
 Realistic 0179, 0420, 0180
 Rotel 0157, 0420
 SAE 0157
 Sansui 0157, 0305
 Sanyo 0179
 Scott 0305
 Sears 0305
 Sharp 0037, 0180, 0861
 Sherwood 0180
 Sony 0000, 0185, 0490
 Soundesign 0145
 Tascam 0420
 Teac 0420, 0393, 0174, 0180
 Technics 0029, 0303
 Victor 0072
 Wards 0157, 0053
 Yamaha 0036, 0187
 Yorx 0461
 Setup Codes for DVD Players:
 Harman/Kardon 0582
 JVC 0558
 Kenwood 0534
 Magnavox 0503

Mitsubishi 0521
 Onkyo 0503
 Panasonic 0490
 Philips 0503, 0539
 Pioneer 0525, 0571
 Proscan 0522
 RCA 0522
 Samsung 0573
 Sony 0533
 Technics 0490
 Theta Digital 0571
 Toshiba 0503
 Yamaha 0490, 0545
 Zenith 0503, 0591
 Setup Codes for LD Players:
 Denon 0059
 Mitsubishi 0059
 NAD 0059
 Pioneer 0059
 Sony 0193, 0201
 Setup Codes for Cassette Decks:
 Aiwa 0029, 0197
 Carver 0029
 Denon 0076
 Harman/Kardon 0182, 0029
 JVC 0244, 0273
 Kenwood 0070
 Magnavox 0029
 Marantz 0029
 Onkyo 0135, 0282
 Optimus 0027, 0220
 Panasonic 0229
 Philips 0029
 Pioneer 0027, 0220, 0099
 Sansui 0029
 Sony 0243, 0170, 0291
 Technics 0229
 Victor 0273
 Wards 0027
 Yamaha 0097, 0094

**Setup Codes for Stereo Tuners
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ADC 0531
 Adcom 0616
 Aiwa 0158, 0189, 0121, 0405
 Akai 0224
 Capetronic 0531
 Carver 0189, 0008, 0042, 0360
 Casio 0195
 Clarinet 0195
 Curtis Mathes 0080
 Denon 0004
 Emerson 0424
 Fisher 0042, 0219, 0360
 Garrard 0463, 0424
 Harman/Kardon 0110, 0189, 0891
 JBL 0110
 JVC 0074
 Kenwood 0027, 0186, 0042, 0077
 Koss 0424
 LXI 0181
 Linn 0189
 Lloyd's 0195
 MCS 0039, 0346
 Magnavox 0531, 0189, 0195, 0391
 Marantz 0039, 0189
 Modulaire 0195
 NAD 0320
 Nakamichi 0097, 0347
 Onkyo 0135
 Optimus 0531, 0670, 0186, 0042, 0177, 0181,
 0219, 0738, 0801, 1023
 Panasonic 0039, 0309
 Penney 0195
 Philips 0189, 0391
 Pioneer 0531, 0014, 0150, 0630, 0080, 1023
 Quasar 0039
 RCA 0531, 0054, 0346, 0360, 0530
 Realistic 0195, 0163, 0181
 Sansui 0189, 0346

Sanyo 0219, 0801
 Scott 0163, 0322
 Sharp 0186
 Sherwood 0491, 0502
 Sony 0158, 0168, 0474
 Soundesign 0670
 Teac 0463, 0163
 Technics 0039, 0309, 0208
 Victor 0074
 Wards 0158, 0014, 0189, 0080, 0054
 Yamaha 0176, 0186
 Yorx 0195
 Zenith 0857
Setup Codes for Stereo Amplifiers:
 Aiwa 0406
 Carver 0269
 Curtis Mathes 0300
 Denon 0160
 Harman/Kardon 0892
 JVC 0331
 Linn 0269
 Magnavox 0269
 Marantz 0269
 Panasonic 0308
 Philips 0269, 0892
 Pioneer 0013, 0300
 Sony 0220, 0689
 Technics 0308
 Victor 0331
 Wards 0013
 Yamaha 0354
Setup Codes for Home Automation:
 GE 0240
 Lutron 0597
 One For All 0167
 Radio Shack 0240
 Security System 0167
 Universal X10 0167
 X10 0167
 Setup Codes for DBS Audio Services:

Aiwa 0010, 0159, 0404
 Fisher 0052
 Harman/Kardon 0477
 JBL 0477
 JVC 0073
 Jerrold 0459, 0520
 RCA 0056
 Scientific Atlanta 0460
 Sony 0010, 0159
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